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NEW HOMES

FOR

THE OLD COUNTRY.

BLACKS STALKING EMEUS

EW HOMES

FOR THE

OLD COUNTRY.

A PERSONAL EXPERIENCE OF THE POLITICAL AND DOMESTIC LIFE, THE INDUSTRIES, AND THE NATURAL HISTORY

OF

AUSTRALIA AND NEW ZEALAND.

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BY

GEORGE S. BADEN-POWELL.

PLATYPI SWIMMING AND CLEANING.

LIBRARY OF THE HOMES OF THE OLD COUNTRY

WITH FORTY-SIX ILLUSTRATIONS.

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1873

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PREFACE.

THOSE living in the Colonies; their mothers, grandmothers, aunts, and friends, in England—people with sons—people with nephews—people with grandsons—people with poor prospects—people dissatisfied—people with money, and people without;—in short, those going themselves, or sending others, to new homes;—politicians, patriots, naturalists, travellers, invalids, merchants, traders, investors, speculators;—all these, and many more, need information concerning our Colonies.

Therefore, no excuse need be offered for bringing before them some results of personal observation and experience, gained under very exceptional advantages; and here condensed into one volume.

G. B. P.

CONTENTS.

DIVISION I.

GEOGRAPHICAL AND SOCIAL.

CHAPTER I.

THE WHEREABOUTS OF AUSTRALIA.

Information much wanted.—Knowledge of Geography not to be despised.—Brief particulars of various places . . . . *Page* 3

CHAPTER II.

ARRIVAL.

The last days.—Packing up.—The Heads.—Port Jackson.—Which is the most beautiful harbour in the world? . . . . . *Page* 11

CHAPTER III.

SYDNEY.

Waste ground.—The Domain.—Hyde Park.—Suburbs.—Fellmongering.—The University.—Postal lectures.—Shouting.—Racing.—Bathing . . . . . *Page* 23

CHAPTER IV.

MELBOURNE.

Port Phillip.—Yarra Yarra.—Regularity of the streets.—Water supply.—Floods.—Drainage too perfect.—City deserted.—Cars. *Page* 37

CONTENTS.

DIVISION I.

GEOGRAPHICAL AND SOCIAL.

CHAPTER I.

THE WHEREABOUTS OF AUSTRALIA.

Information much wanted.—Knowledge of Geography not to be despised.—Brief particulars of various places . . . . *Page* 3

CHAPTER II.

ARRIVAL.

The last days.—Packing up.—The Heads.—Port Jackson.—Which is the most beautiful harbour in the world? . . . . . *Page* 11

CHAPTER III.

SYDNEY.

Waste ground.—The Domain.—Hyde Park.—Suburbs.—Fellmongering.—The University.—Postal lectures.—Shouting.—Racing.—Bathing . . . . . *Page* 23

CHAPTER IV.

MELBOURNE.

Port Phillip.—Yarra Yarra.—Regularity of the streets.—Water supply.—Floods.—Drainage too perfect.—City deserted.—Cars. *Page* 37

CHAPTER V.

GOLD DISTRICTS.

Gold towns.—No trees.—South Australia.—Queensland.—Adelaide flour.—Eden.—Shipping cattle . . . . . *Page* 47

CHAPTER VI.

TASMANIA.

Cape Pillar.—English green.—Hops.—Trout.—Coast scenery.—Convicts.—Absconders.—Pavements.—Tasman's wooden leg.—The Jordan . . . . . *Page* 55

CHAPTER VII.

ISLANDS.

The Feejees.—Cotton.—Annexation.—Hill-tribes.—New Caledonia.—Lord Howe Island.—The Chatham group . . . . . *Page* 66

CHAPTER VIII.

NEW ZEALAND, LOCAL.

Capitals.—Alps.—Plains.—Lyttelton.—Christchurch.—Watercress.—Artesian wells.—Crossing rivers.—Ferrying over.—Travelling over the plains . . . . . *Page* 70

CHAPTER IX.

NEW ZEALAND, SOCIAL.

Spars.—Missionaries.—Gold.—Mail routes.—Maories.—Snow.—Wind . . . . . *Page* 83

DIVISION II.

WAYS AND MEANS OF GETTING ABOUT.

CHAPTER X.

RAIL AND ROADS.

Railways.—Timber trees.—Telegraph posts.—Locks.—Steamers.—Bridle tracks.—Origin of roads . . . . . *Page* 93

CHAPTER XI.

BUSHRANGERS.

Tutelary bushrangers.—"Thunderbolt's" dodge.—Hotel "stuck up."—Trackers.—Mails stopped.—Harbouring bushrangers.—Aiding them . . . . . *Page* 99

CHAPTER XII.

COACHES AND HACKS.

Coach.—Mail-station.—Night dangers.—Breaks breaking.—Journey of a letter.—Buggies.—No post-horses.—Bicycles.—Hacks.—Sore backs . . . . . *Page* 107

CHAPTER XIII.

WAYFARERS.

Drays.—Boggy places.—Bushmen.—Well-sinking.—Swags.—Travelling stock.—Sheep inspectors.—Boxing.—How people live on other people's grass.—Remedy.—Diseases . . . . . *Page* 118

CHAPTER XIV.

FOOD AND REST.

Stations for the night.—Townships.—Stores.—Government buildings.—Churches.—Clergymen.—Extempore sermons.—Doctors.—Pianoforte tuners.—Inns.—Prices.—Feeds.—Camping out.—Johnny cakes.—Gunyah.—Waking up . . . . . *Page* 128

CHAPTER XV.

FLOODS.

Naming places.—Newcastle coal.—Sandy creeks.—Rivers bank and bank.—Swimming horses.—Logs.—Measuring rivers.—Crossing stock.—Camels.—Mules . . . . . *Page* 140

DIVISION III.

LIFE IN THE BUSH.

CHAPTER XVI.

STATIONS.

Squatters.—Everlasting mutton.—Head stations.—Slabs.—Interiors.—Fireplaces.—Pigs and peaches.—Hay.—Expenses.—Boiling down.—Wool down.—Stores.—Babies' hoods.—Opium . . . *Page* 149

CHAPTER XVII.

SHEPHERDING.

The Super.—Flocks.—Out-stations.—Huts.—Papering.—Lamp.—Lord Chancellors.—Furniture.—Shepherds' wives.—Lost sheep.—Chancing.—Dingos.—Lambing . . . . . *Page* 159

CHAPTER XVIII.

PADDOCKING AND SHEARING.

Shepherding *versus* paddocking.—Wool-sheds.—Smoke-oh!—Shearing.—Washing.—Seeds.—Bathurst burr.—Foot rot.—Salt.—Toot. *Page* 171

CHAPTER XIX.

CATTLE HUNTING.

Cattle camps.—Branding.—Stockmen.—"Duffers."—"Nuggets."—Mustering.—Coaching.—Hard riding.—Spins.—Scrubs.—"Go in big lemons."—Entry of the wild mob.—Stock-whip . . *Page* 180

CHAPTER XX.

CATTLE DRAFTING.

Charging cows.—Dogs.—Heeling.—Disobedience of dogs.—Masters' stupidity.—Training.—Yards.—Drafting.—Branding.—Outsiders.—Noticing beasts.—"Poor man's friend" . . . . . *Page* 190

CHAPTER XXI.

HORSES.

Paddock.—Stock-horses.—"Buck-jumping."—Wild horses.—Traps for them.—Horse shooting.—Horsehair.—Colonial saddles. *Page* 200

CHAPTER XXII.

FENCING AND CLEARING.

Post and rail.—Chock and log.—Wire fencing.—Bark.—Clearing stumps.—Want of grass.—Varieties of gums.—Swamp oaks.—Couch grass . . . . . *Page* 206

CHAPTER XXIII.

WINE, SUGAR, AND FEATHERS.

Wine houses.—Supply of ships.—Sugar.—Cochineal.—Coffee.—Silk.—Ostrich farming.—Young birds.—Management.—Points of feathers.—Eighty per cent. profit . . . . . *Page* 213

CHAPTER XXIV.

FLAX AND MEAT.

Phormium tenax.—Equal to green hide.—Cultivation of the plant.—Hops.—Supply of meat.—Condition of animals before slaughter.—Iced meat.—Meat boxes *v.* beef casks.—Adipocere.—Dead sheep . . . . . *Page* 223

DIVISION IV.

MINERAL WEALTH.

CHAPTER XXV.

GOLD.

Gold in its primæval envelope.—Gold out of it.—Quartz mining.—Alluvial digging.—Wash-dirt.—Prospecting.—Nuggets.—Sprees.—Poor man's diggings.—Grog shanties . . . . . *Page* 235

CHAPTER XXVI.

PRECIOUS STONES.

Gem dust.—Diamonds.—Identification of stones.—How to tell a diamond . . . . . *Page* 243

CHAPTER XXVII.

COPPER AND COAL.

Smelting.—Difficulty of carriage.—Testing ores very valuable.—The duck's-egg diamond.—Coal at Newcastle.—Natural coal cellars. *Page* 248

DIVISION V.

NATURAL HISTORY.

CHAPTER XXVIII.

GENERAL VIEW.

Marsupials.—Their peculiarities.—Another edition of mammals.—Rearing birds and reptiles.—Enormous antiquity of their remains.—Introduced animals.—No vultures.—Zoological Gardens. *Page* 257

CHAPTER XXIX.

MOSQUITOS.

All over the world.—Their attacks on sportsmen.—Obnoxious bed-fellows.—Their buzzing and its cure . . . . . *Page* 265

CHAPTER XXX.

OTHER INSECTS.

The achievements of centipedes.—Termites.—Insect life.—Concerts in the trees.—Bees.—Stinging and stingless.—Honey.—Grub for food . . . . . *Page* 271

CHAPTER XXXI.

SNAKE-BITES.

Alligators.—Guanas.—Confusion of local names.—Classes of snakes.—Poison-fangs.—Poison swallowed.—Cure for snake-bites.—Antidotes.—Direct injections.—Simple remedy alone applicable. *Page* 275

CHAPTER XXXII.

DEATH-ADDER.

Snakes' legs.—Snakes in footpaths.—How to get drunk gratis.—Extermination of snakes.—Lady Franklin's fund . . . . *Page* 284

CHAPTER XXXIII.

FISH.

Fly-fishing.—Tackle.—Murray cod.—Successful baits.—Salmon.—Their enemies.—Stingaree sticking.—Fish above falls . *Page* 288

CHAPTER XXXIV.

THE PLATYPUS.

Fur.—Difficult to skin.—Immense swimming powers.—Spurs.—Platypus ashore.—The use of spurs.—How to get platypi.—His gambols.—The way to hit him.—His food.—His home. *Page* 296

CHAPTER XXXV.

THE PLATYPUS AND THE ECHIDNA.

Mammalian.—Oviparous and ovoviviparous.—Connecting link between mammals and reptiles.—Mother supplies the milk.—Young one born to live by it.—The voyage home.—Food.—Platypus pond wanted in Australia.—The "Porcupine."—Its extraordinary strength.—Two varieties . . . . . *Page* 307

CHAPTER XXXVI.

BEARS AND CATS.

Koala.—The cry of the wounded.—Bear in captivity.—The badger.—The 'possum.—'Possum rugs.—Skins.—Burning out.—Cutting out.—Native cats.—Drowned in pig-slosh . . . . . *Page* 315

CHAPTER XXXVII.

KANGAROO LIVING.

Ingratitude. — Kangaroo rats. — Coursing. — Rock-wallabies. — Their thirst for knowledge.—"Paddy-melons."—Bush-wallaby shooting.—Wallaroos.—Their bites.—"Red soldiers" and "blue fliers."—Ripping.—Use of tail.—Swimming kangaroos . . . . *Page* 321

CHAPTER XXXVIII.

KANGAROO KILLING.

Kangaroo dogs.—Mode of attack.—Control of the pack.—"Riding to the dogs."—Inquisitive kangaroos.—Where to aim.—Tame kangaroos.—Eating them.—Mutton or beef . . . . . *Page* 332

CHAPTER XXXIX.

BIRDS NOT GAME.

Eagle-hawk.—Crows crying.—Magpies and mice.—"Laughing jackass."—"Soldier birds."—Birds' calls.—Parrots . . . . . *Page* 339

CHAPTER XL.

LAND GAME BIRDS.

Game laws.—Emeus.—Stalking blacks.—Turkeys.—Stone curlews.—Spur-wings. — Lyre-tails. — Scrub shooting. — Pigeons. — Squatter pigeons.—Filling the pot.—Dogs.—Quail . . . . . *Page* 345

CHAPTER XLI.

WATER GAME BIRDS.

Black swans. — Ducks in trees. — Water-holes. — Wounded divers. — Artificial retriever.—Shags.—Musk duck.—How to get him.—Snipe . . . . . *Page* 356

CHAPTER XLII.

DOGS AND FLYING FOXES.

Dingoes.—Partiality for mutton.—Hounds.—Flying foxes.—Destruction of fruit.—Camping grounds.—Easy to obtain . . *Page* 363

CHAPTER XLIII.

HUNTING AND SHOOTING.

Plenty of both.—Camping.—Shooting by moonlight.—Waking up.—Rolling up.—Tea-tree.—"Pot" and "flying" shots.—Various game.—Pointers.—Spaniels.—Rabbits.—Invasion of rats . . *Page* 369

CHAPTER XLIV.

MOAS AND WEEKAS.

All birds and fish.—Moa extinct since 1400.—Cross between a snipe and a monkey.—The wood-hen.—Its thievish propensities.—Its slaughter.—How to catch it.—It is a cannibal.—"Kaa-kaas."—Ducks . . . . . *Page* 379

CHAPTER XLV.

PIGS AND GAME.

Pigs eat lambs.—Tail worth eighteenpence.—Bailing up pigs.—Charges.—Stabs from "Spaniards."—Moors.—Blow-flies. *Page* 386

DIVISION VI.

NATIVES AND CLIMATE.

CHAPTER XLVI.

ABORIGINALS.

Test of education.—Tame blacks.—Independence.—Grog and tobacco.—Work for pleasure.—Black boys.—Borer.—First bites.—Starving or gorged. . . . . *Page* 395

CHAPTER XLVII.

NATIVES AND NEW CHUMS.

"Cornstalks."—Australian language.—Ignorance of the English.—Ignorance of the Australians.—Green-hands.—Bush experience.—Every man for his own.—The best riders in the world . *Page* 401

CHAPTER XLVIII.

CLIMATE.

Influence of composition of surface. — Systematic registration. — Christmas Day.—"Southerly busters."—Hurricane lanes.—Never-contentedness.—Ocean, desert, or fertile plains.—Cows make rivers.—Abundance of agricultural land.—Ice, snow, and sleet. *Page* 408

CHAPTER XLIX.

AMELIORATION OF CLIMATE.

Black soil.—How saplings came.—Damming.—Wells.—Storage of water.—Effect of trees.—Their great use.—Cork and olives.—Pines and swamps.—Irrigation . . . . . *Page* 416

DIVISION VII.

POLITICAL FEATURES.

CHAPTER L.

PRESENT CONDITION OF LABOUR.

Origin of Colonies.—Vast capabilities of Australia.—Want of population.—"Busy times."—Gold.—Unsettled natures.—Knocking down a "pile."—Investments for bushmen.—Sudden fortunes.—Rich Australians.—"Unemployed" . . . . . *Page* 425

CHAPTER LI.

BENEFITS OF EMIGRATION.

Manufactories.—Want of labour.—Slavery.—Black labour.—Mutual good.—Colonies for emigrants.—Emigrants useful to all.—Australian newspapers wanted.—Emigrants' ideas. . . . . *Page* 435

CHAPTER LII.

ADVICE TO EMIGRANTS.

What to do up country.—The labouring man.—Information wanted in newspapers.—Answers always one-sided.—Colonies all much the same with regard to life.—Long voyages very desirable.—Bush different from old country.—Squatter's life.—When to invest.—Advisers.—Looking round.—What to do without capital.—Ladies in the bush.—Ne'er-do-weels give bad accounts.—Failures make much noise.—Moderate successes are not heard of . . *Page* 444

CHAPTER LIII.

THE LAND QUESTION.

Squatters *v.* "Free-selectors."—Pastorals first occupiers.—Agriculturals first owners.—Squatters could make enormous improvements.—Government should aid them.—Failures of "Free-selectors."—Picking out the "eyes" of a run.—"Gully-rakers" . . *Page* 456

CHAPTER LIV.

NATURAL CAPITALS.

Circumstances and talents.—Capitals.—Love of owning land.—Bad idea for emigrants . . . . . *Page* 462

CHAPTER LV.

SYSTEMS OF COLONIZATION.

Various systems.—Greeks like English.—Grew to great power.—No community of government.—All disappeared.—Roman plan like our Indian.—America proves English system by far the best.—Duty of the old country . . . . . *Page* 468

CHAPTER LVI.

ABNORMAL CONDITIONS.

Present relations.—Colonies rapidly becoming States.—New phase of existence.—New relations with the old country.—One government bad.—Secession of Colonies ruinous for both.—Federation beneficial to all.—Question of very great importance.—Groups of Colonies to form independent powers would destroy the enormous power of the huge British Empire . . . . . *Page* 476

CHAPTER LVII.

CONSOLIDATED EMPIRE.

Federation. — Local government. — Each Colony one State. — Local groups as one State.—General Parliament of representatives.—Its many duties. — Offence and defence. — Defence of Australia. — Navy.—Arbitration instead of war.—Enormous influence of such an empire . . . . . *Page* 483

APPENDIX . . . . . *Page* 493

INDEX . . . . . *Page* 499

LIST OF ILLUSTRATIONS.

PAGE

Blacks stalking Emeus (see page 346) . . . . *Frontispiece.*
Map of Australia and New Zealand 6
Plan of Port Jackson 15
Bathing-place in Sydney Harbour 35
Plan of Melbourne 38
Car in Melbourne 45
Getting Cattle off to Steamer 52
Hobart Town from Mount Nelson . . . . . *To face* 57
Signal Semaphore at Port Arthur 60
Eagle Hawk Neck 62
Bushrangers "sticking up" the Mail-coach 104
Mail-coach 107
Mail-station 109
Swag-men 123
Plan for measuring width of Rivers 144
A Head Station 154
Shepherd's Hut 162
Cattle Hunting 187
"Charging" Cows 191
Shooting Wild Horses 203
Post and Rail Fence 206
Chock and Log Fence 207
The Platypus 297
Platypi swimming and cleaning 302
Manner of diving of the Platypus 304
"Porcupine" Echidna 313

PAGE
Smoking out Opossums 318
Native Cats 319
Rock Wallabies 323
Boldness of Rock Wallaby 324
Wallaroos 327
Kangaroos 328
Method of Defence 329
Tail whilst moving 330
Tail whilst stationary, feeding, &c. 331
Kangaroo Hunting 333
Shooting Kangaroo . . . . . *To face* 335
Ducks and Bustard 358
Way of getting Ducks out of Water 360
Flying Fox eating Pears 365
Camping Ground of Flying Foxes 367
Camp at Night 370
Wood-hen or Weeka 384
Boar bailed up 388
Wounded Sow 390
Blacks feeding . . . . . *To face* 399

DIVISION I.

GEOGRAPHICAL AND SOCIAL.

NEW HOMES

FOR

THE OLD COUNTRY.

CHAPTER I.

THE WHEREABOUTS OF AUSTRALIA.

INFORMATION MUCH WANTED.—KNOWLEDGE OF GEOGRAPHY NOT TO BE DESPISED.—BRIEF PARTICULARS OF VARIOUS PLACES.

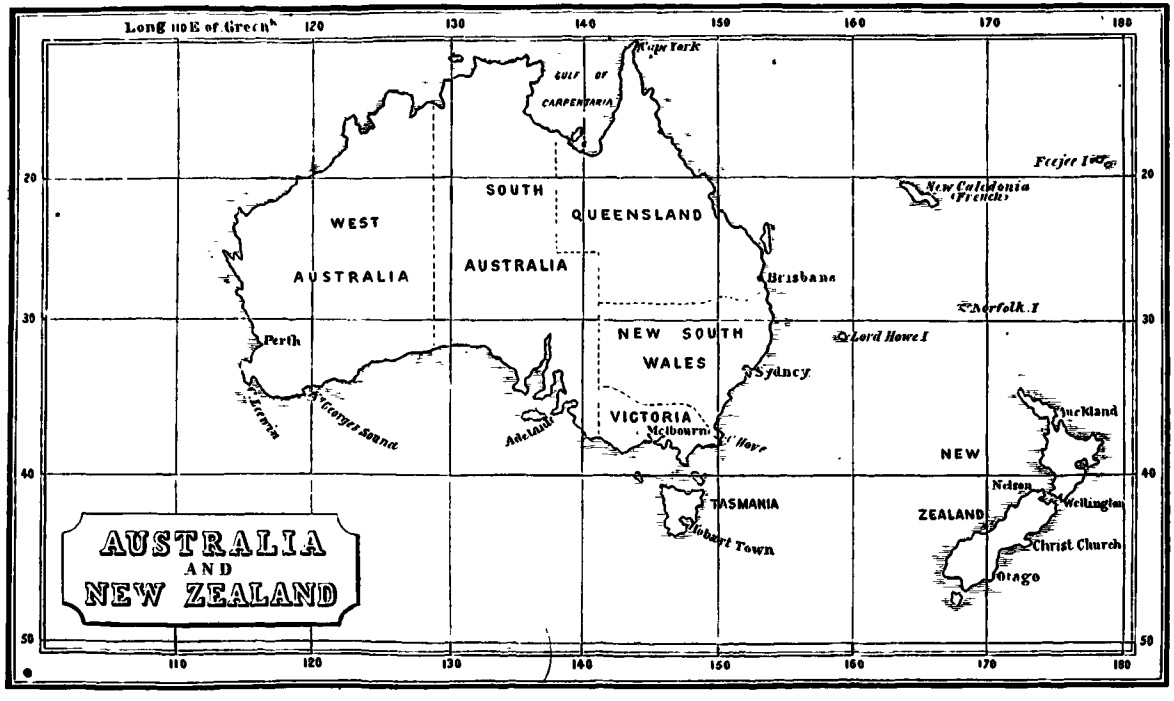
TWO important questions have of late forced themselves on the attention of the English public.

In the first place, the great growth of population has driven many to the necessity of emigration: and for all such persons information concerning places to which to emigrate naturally becomes an object of anxious inquiry.

The other question is of still higher importance, though indeed of comparatively recent birth. England has numerous colonies, each rapidly attaining powerful size; and the question of their future relations with the mother country demands a no very distant settlement. This great problem claims the serious consideration of every British subject: but acquaintance with the several colonies is indispensable to a proper estimation of their relative position. Few have time, or opportunities, to gain this acquaintance by personal visits to the countries themselves, and they are forced to depend on accounts given by others.

During my sojourn in the Australias many circumstances struck me as entirely without mention in any of the books on the subject which I had so eagerly read before leaving England. But few authors had, apparently, been in the civilized portions of the interior; descriptions of life in the sea-coast towns or in previously unexplored wilds seeming to monopolize the pages of most such books.

An intimate acquaintance with a far distant land, with which one has but little connection, is not generally considered essential to one's


Long nde of Greenh
120
130
140
150
160
170
180
Cape York
GULF OF CARPENTARIA
Feejee I
New Caledonia (French)
SOUTH AUSTRALIA
WEST AUSTRALIA
QUEENSLAND
AUSTRALIA
Brisbane
Norfolk I
Lord Howe I
Perth
NEW SOUTH WALES
Sydney
Geographe Sound
Adelaide
VICTORIA
Melbourne
Cape Howe
NEW ZEALAND
Auckland
Nelson
Wellington
Christ Church
Otago
TASMANIA
Hobart Town
AUSTRALIA AND NEW ZEALAND
20
30
40
50
110
120
130
140
150
160
170
180

well-being; nevertheless, when reading, writing, or thinking about such a land, some slight idea as to its whereabouts is by no means to be despised; and therefore we will devote our first thoughts to a glance at the general geography of the Australias.

With one eye on the map, it will be seen that in the Australian part of the world there are seven English colonies—five on the "Big Island," and two on the adjoining *insulæ*.

Commencing with the "Big Island," which occupies an area of two and a half million square miles, and is therefore nearly as large as Europe, we find on its extreme left:—

1st. *Western Australia*, sometimes called Swan River, which occupies the west coast, and has for its capital the town of Perth. This colony is the least settled of all in Australia, though it offers pastoral and agricultural land, gold and other minerals, and a pearl fishery,—the latter a very rare element in a British colony.

2nd. *South Australia* consists of a broad strip right across the Island, lying along the east of Western Australia. Wherefore its name of *South* Australia one does not exactly see, inas-

much as it does not contain the southernmost portions of the Island, but does embrace a large part of the coast on the north, which indeed formerly went by the name of North Australia: schoolboys mutter something about *lucus a non lucendo*, or other equally lucid explanation. The capital, Adelaide, is the centre of a great wheat-growing tract, and the colony generally is specially rich in minerals.

3rd. To the southward and eastward of South Australia lies *Victoria*, with its splendid capital, Melbourne. In territorial extent this colony ranks lowest, though in population, wealth, and prosperity it shares with New South Wales the foremost place. Within its boundaries lie as good grazing land, as fertile agricultural districts, and as rich gold-fields, as are to be found in any of the colonies. To the abundant occurrence of the yellow metal Victoria owes, in the main, her marvellously rapid growth.

4th. Victoria is bounded on the north by *New South Wales*, the oldest, and in a great measure the parent, of all the neighbouring colonies; Sydney, its capital, being the first town planted in the Antipodes. This colony comprises a vast

tract of grazing country, the whole of which is not even yet in use; and is particularly rich in minerals of all sorts, even including diamonds.

5th. *Queensland* occupies the north-eastern corner of the Island, stretching away till within some eleven degrees of the equator. This young colony bids fair to grow both fast and steadily. On the higher lands the finer sorts of sheep thrive well, and on her seaboard the tropical climate should induce the growth of cotton, sugar, coffee, and other hot-clime products, which will, in future days, find a good market in the colder southern colonies.

Having thus glanced all over the "Big Island," we turn southwards to the smaller island of *Tasmania*, of somewhat less extent than Ireland. Although not exporting largely the usual colonial produce, its temperate climate renders its fruit of singular value, and attracts numerous visitors from hotter regions. The former name, Van Diemen's Land, has now become obsolete.

Lastly, we come to perhaps the most remarkable of all our colonies—*New Zealand*, which embraces two larger islands, together about equal in extent to the British Isles. Here we find a native popu-

lation of considerable power, wealth in gold and other minerals, and a large export of wool.

Of all these southern colonies the governments are pretty much the same; consisting of a governor, appointed in England, a legislative council, and a legislative assembly elected by universal suffrage; the whole much resembling the Crown, Lords, and Commons of England.

New Zealand, in addition to this arrangement for the whole colony, has a separate government for each of its subdivisions or "Provinces."

CHAPTER II.

ARRIVAL.

THE LAST DAYS.—PACKING UP.—THE HEADS.—PORT JACKSON.—WHICH IS THE MOST BEAUTIFUL HARBOUR IN THE WORLD.

LET us board some large passenger ship, whence the previous evening land had been sighted; the first land for some seventy days. Wilson's Promontory, Australia's southernmost point, has been passed; and, with a light north-easterly breeze, has the vessel been working along the land. Those who might by any possibility be supposed to possess such knowledge are being eagerly questioned by each passenger as to the distance between Sydney and each successive bay or headland as it is passed: curious fact it is, that each, in his inmost soul, prefers credence to those who give the shortest distances.

Now turn we to the general state of the passengers. They are excitedly drawing tickets in the various lotteries, eagerly got up, as to when

The Heads should first be sighted, as to the exact moment when the pilot should set foot on deck, and many other equally interesting events of the moment. For the last few days everybody has been busy packing up. Empty cases of every make, size, or kind, have been in great demand from the steward. A wonderful change has come over all: no more the listless lolling about the deck; no passengers reclining in chairs, sewing or reading; not even the twos or threes taking their vigorous constitutionals up and down the poop, or limited main-deck, as assiduously as if on that depended their success in life. For some days on every countenance has been graven "business;" all have been busy, some to outward semblance even anxious: but midst all there crops up an unaccountable propensity to be friendly with every one; and if ever a moment can be spared from time which has now become suddenly so precious, it is devoted to slaps on the back and various other supposed signs of friendly congratulation.

Emerging from the busy disorder of the cabins, to lend a hand at meals, surrounded by familiar faces, dishes, and attendant men and things, there

steals over all a certain vague regret that the voyage's end is so close at hand, in utter disregard of the fact that this same consummation has been so longed for during three or four months, spent happily on the whole, in spite of sundry little tiffs and quarrels.

When on deck for the inevitable smoke, what most arrests our attention is the extraordinary calmness of the sea; that long ocean swell, without which we had never been, since leaving the Channel, having now apparently quite deserted us. This calmness, however, was evidently not appreciated by the passengers on board a small steamer rolling, pitching, and puffing along the shore which we were now approaching.

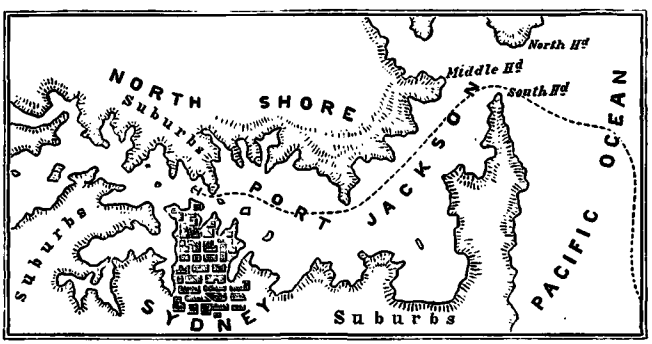
Right ahead could be detected an apparently impenetrable wall of high land, fading away on either hand till in the blue distance sea, land, and sky lost themselves in one another. In this wall, excited Australians told us, there existed an opening into the most beautiful, commodious, in fact "most perfect," harbour in the world: but were it not for the fact of the ships heading right for this wall, no one would have believed it to have contained such opening.

The distant coast appeared steep and rocky, the heights apparently being destitute of trees, whilst the only part of Australia, namely that round Cape Otway, of which we had as yet had a near view, was clothed with their dark green. With the help of a light north-easter, we rapidly drew nigh the land; then the size and grandeur of the cliffs became more and more apparent; on their tops could be discovered little specks of white houses dotted over what to us, who had for so long gazed on nought "*nil nisi pontus et aer*," appeared as bright green downs. Already could the two Heads of Port Jackson be made out, though the entrance between them was only just discernible, there being a third, or "Middle Head," appearing right in the midst of this stupendous gateway, through which we were to pass.

The North Head, on our right hand, appeared one towering precipice of, apparently, sandstone, worn by wind and weather into all forms of pinnacles, ledges, and jutting buttresses. The South Head, on our left, carried on its brow a tall white lighthouse, and on a mast near it signal flags were busily at work questioning us; the answers being telegraphed up to Sydney. About

this time the height of these grand and portentous cliffs was aptly illustrated by the appearance of a mighty tug, rolling out to meet us, appearing a mere pigmy, all but lost in the gloom and overshadowing of the gigantic portals.

Breakfast that day lost all ceremony, and each, as soon as the cravings of hunger were quieted,



PLAN OF PORT JACKSON.

made a rush on deck. The sight presented was, indeed, one not to be missed. On either hand, towering over us, were these magnificent faces of rock, appearing to us, who had been near nothing since leaving Plymouth breakwater, almost within biscuit shot. This was our introduction to the harbour of Port Jackson.

Our present course appeared blocked by the rocky

face of the Middle Head, jutting out into the blue waters, and covered as to its top with a confused mass of rocks, bushes, grass, and gum-trees, with their brownish-green foliage. Thus was the harbour apparently divided into two arms. To the right of the Head appeared long reaches of water; some ending in sandy bays glistening in the sun, and others leading round miniature capes to miles of beautiful reaches. To the left our tug was towing us round the South Head up another arm, apparently nearly parallel to the coast-line. Between us and the sea was high land; at its base a sandy beach, with a scattered village nestling up the sides of what much resembled moors, covered, as these heights were, with a low scrub, or brushwood. Every here and there the expanse was broken by the white walls of some villa; and along the summit, against the bright blue sky, the lighthouse, flag-staff, and three or four houses, stood out in bold relief. Turning our attention to our right, we found ourselves astonishingly close in to the shore, and so had our first peep at Australian scrub within reasonable distance.

The shore was fringed with sandstone rocks, whose wave-worn bases ran sheer into the beau-

tifully blue water; immediately above the rocks commenced vegetation in the shape of various grasses and low shrubs. Then there were trees of many sorts, the gums, with their light grey-coloured trunks, predominating; and every here and there the charred stems of the trees would bear witness to some recent bush fire, though the earth had lost all mark of it in the fresh green vegetation which had sprung up since. This ridge was indented with cosy little bays, nooks, and corners, up each of which the blue swell, caused by the tug, rolling onwards between two walls of rock, broke with a splash upon a tiny sandy beach at the foot of a pretty little wooded "chine." As we rounded a small promontory a breeze came off the land; it felt quite warm on the face, and was laden with the whirring, whistling, clacking of tens of thousands of cicadas and such-like insects.

On the opposite shore we were now abreast of a wooded promontory, and several houses, apparently large gentlemen's seats, peeped comfortably from the cleared spaces in the wood: a little rocky island stood there to guard the entrance into a bay, evidently of some extent, its opposite shore being bounded by a long strip of

yellow sand, enough to make the fortune of any place on the English sea-coast, could it be transported thither.

And now on either hand houses become more frequent. On our left we pass several bays, running in under high land, their shores and their precipitous sides dotted about with fine houses, while on the heights above stand out long rows of villas, clearly showing the proximity of some large town. In front are wooded headlands and islands, and behind them the tops of church steeples and masts of ships.

We have now been towed some seven miles up the harbour, and on our left are passing close to a long stone fort covering the whole of a small islet; and in the rear of this Fort Macquarie some soldiers' wives give us just one glance and then go on with their work of hanging out clothes, evidently quite accustomed to seeing vessels arrive, and never for a moment sympathizing with the many souls on board now for the first time realizing their arrival in a new land of good promise. However, two artillerymen, fishing out of a small boat, give us a sort of cheer, our first welcome to Australia.

Suddenly the pilot arrests everybody's attention. He has been rapidly crossing and recrossing the poop, constantly looking out for objects on all sides; and now he puts his hands to his mouth, and vents forth a doubtful query of "Ready with the anchor?" which is presently answered in a (to us) well-known voice, oft heard in the depth of night, "All ready forward, sir." Then the pilot strides swiftly across the poop, halts abruptly on the top of one of the ladders, and looks vaguely round. All at once, as if inspired with a sudden thought, so sudden indeed that his hands come up to his mouth too late, he utters a gruff howl of "Let go." A half-stifled shout is wafted aft of "Stand clear, below-oh." Then the uninitiated are startled with a loud bang, splash, rattle, rattle, rattle, and the good ship quivers as the cable runs out, and the voyage is over.

English boats, manned by English faces, appear swarming from the shore. Let us just take a hasty glance round before our friends come to claim our attention. On our left a very pretty bay is bounded by a rocky promontory known as Lady Macquarie's Chair; then, further in, the bay is clothed down to the water's edge with a beautiful,

park-like garden, the "Inner Domain," or Botanical Gardens. The right-hand shore of the bay is rocky, and on the crest of these rocks runs a paling, within which rise the undulating lawns at the top of which stands Government House, a pretty castellated building of freestone. The Government House ridge terminates in a long low spur, which affords sure foundation for the solid masonry of fortifications which appears to the eye to rest on the water.

Above the Botanical Gardens and behind Government House, Sydney is to be recognized by sundry housetops and church steeples. To the right of Government House peak up the gables of huge warehouses (wool-stores), which are outstripped in height by the trim masts of several fine vessels, proving the existence of a bay beyond the fort. This bay is the celebrated Sydney Cove, on whose opposite shore rise more warehouses, above the roofs of shops, and above these again appear dwelling-houses and villas; but the highest point of all is covered with grass and the buildings and garden of the Observatory, with its tower, time-ball, and attendant flagstaffs. Beyond this the harbour wanders indefinitely into all sorts and sizes

of pretty bays and arms, the longest being that which finally ends in the Paramatta river. Rugged islands and cliffs appear on all hands, and rocky, tree-covered, high lands, dotted here and there with houses.

One hears so continually of Port Jackson being the most beautiful harbour in the world, that one is naturally inclined to consider and think whether there may not be some adequate incentive promoting the everlasting question put by Sydneyites to newcomers, "What do you think of our harbour?" and to which question an answer full of inordinate praise of the said harbour is looked for, as a matter of course.

In spite of Rioites and Port Jacksonites, the "most beautiful harbour in the world" is a moral impossibility. "*Quot homines tot sententiæ*"—it would be impossible to get all mankind to have one and the same opinion on any one subject. It must be remembered, too, that the picturesque contains such endless varieties of equal value. The Sydney harbour may abound in lovely nooks and corners, and apparently endless intricacies of deep blue water, but it is not therefore that it outbids the calm, mountainous beauty of Vigo. The magnificent

spread of the ports of Constantinople or Lisbon would never be compared with Rio's splendid amphitheatre of mountains, or with Table Mountain rising up 3,000 feet almost sheer out of Table Bay. Port Jackson contains charms of its own, thereby giving it rank with those of the first class in beauty. One of its most striking features perhaps is the vegetation, which appears totally different from that seen in any other part of the world.

Harbours are liable to more praise in comparison with inland beauties than perhaps is their due; they being essentially points of arrival or departure. The eyes of those arriving are gladdened with a long-wished-for glimpse of the green on *terra firma;* and the shore, after a voyage, ever looks particularly inviting. Those on the eve of departure, oftentimes fresh from the interior, then for the first time become acquainted with the peculiar beauties of the combination of land and water in scenery.

CHAPTER III.

SYDNEY.

WASTE GROUND. — THE DOMAIN. — HYDE PARK. — SUBURBS. — FELLMONGERING. — THE UNIVERSITY. — POSTAL LECTURES. — SHOUTING. — RACING. — BATHING.

THE ground on which Sydney is built rises and falls considerably, giving the whole a picturesque effect, though interfering with the appearance of regularity. Thanks to the depth of the water, vessels are enabled to lie close alongside the quays, as if they were in artificial docks. On first landing in the "Cove" one notices a great many handsome buildings, faced with a nice-looking freestone; but the effect is marred by these buildings rising in all sorts of places, and in no kind of order: here stand a long row of five- and six-storeyed wool-stores, there the Custom-house, then several other fine buildings, planted about in strange forgetfulness of each other's presence, causing regret that they were not all erected upon some well-defined plan.

A properly planned utilization of the land in the immediate neighbourhood of the Cove would render it a magnificent and uncommonly picturesque port. However, the growth of Sydney, the mother city of these colonies, has been achieved under peculiar circumstances; and hence the regularity and plan which obtains in Melbourne and elsewhere, could not be brought into play at the time of its first foundation. The various stages in the rapid growth of this city were, in a measure, a series of surprises, concomitant with the successive developments of the many unknown resources of the country; and these, not being expected, were not provided for. However, in some parts much has been done to promote regularity, and to surround important buildings with appropriate space. It is indeed to be regretted that in this latter respect the magnificent new Post Office should be so harshly treated.

George Street is *the* street of Sydney, and possesses many really good buildings, banks, shops, post office, &c. The shop windows might make one imagine oneself in London. But the whole good effect is lost, owing to the verandahs, which stretch across the pathway before almost every shop:

for each is put up in accordance with the taste or means of the proprietor, thereby presenting a very motley appearance with regard to shape, form, and material.

On the fronts of these verandahs will be found hooks and rings, on which to hang bridles of horses; for every one here, with a few pounds to spare, keeps a hack on which he does his daily round of business; and these horses are seen in numbers all along the streets, waiting for their masters.

The well-known apparatus on each verandah post is so very simple and effective, that it merits description. An iron hook is firmly driven into the post, and from the underside of this hook depends a ring some three inches in diameter. On alighting at a house, the bight of the bridle is passed up through the ring, and caught over the hook, from which no manœuvres on the horse's part can dislodge the bridle. Some horses, however, get so accustomed to waiting quietly, that they are entirely trusted to their own devices, notwithstanding the risk of the bridle slipping over the head and getting covered with mud, or even broken by the fore-legs.

It strikes a stranger as remarkable that all these hacks, and even carriage horses, should be dis-

figured with their owners' brands. Amidst the bright leather of costly harness, branded on the shapely shoulder of a well-groomed carriage horse, one reads the large initials of the owner.

Hansom cabs and omnibuses bustle about the streets, though in place of those wretched abominations called "four-wheelers" appear neat flys.

The Domain is a public park, of which Sydney has, indeed, cause to be proud. Attached to it are Government House, with extensive grounds, and also the Botanical Gardens, the whole taking up a pretty undulating space, bordered by Woolloomooloo Bay on the east, by Hyde Park on the south, and on the north by Farm Cove. The Botanical Gardens are open free all day, and form a *place de ressort* not to be excelled in any part of the world.

The gardens, singularly aided by nature, and also by clever management, would of themselves be sufficient, but the whole effect is much heightened by the beautiful views afforded over rocks, from under clumps of bamboos, out of long avenues, over stately trees, of the bright blue water glistening in the sun: beyond the water rises the rocky, tree-covered, north shore, with villas peeping out here and there, in strong contrast to the dark black hull of

some one of the men-of-war of the present day, with its squat, stout rigging, whose moorings are in Farm Cove. In these gardens, which have the name of "Inner Domain," is kept an interesting collection of live birds. The "Outer Domain" has more the features of a park, and in it is the great Sydney cricket ground.

Along the top of the ridge on the west side of the Domain runs Macquarie Street, containing the Houses of Parliament, many of the clubs, &c. &c. The end of this fine street towards the harbour suffers, with the whole of that part of the city, from the prevalence of patches of waste ground which separate very tasty and fine buildings of all sorts. Were these pieces of waste ground kept as neat spaces of smooth gravel, all would be well; but at present they appear very wildernesses, all ridges, mounds, and holes, bestrewn with paper, straw, and other such small rubbish, thereby immensely detracting from the fine appearance of the buildings.

On the high land about the middle of Sydney stands Hyde Park, a green quadrangular space, planted with trees. Standing on the east side of this is seen a particularly massive freestone building; this is the Museum, which contains a capitally

arranged collection of the preserved inhabitants of the Australias and rest of the world, the whole zealously tended by an able curator.

As Melbourne to gold, so Sydney may be said to owe its existence mainly to wool; and hence we find a number of rich merchants and professional men who avail themselves of the many beautiful spots in the neighbourhood to build them homes. Sydney has a splendid girdle of suburbs, stretching in all directions, but the generally barren or swampy nature of the land around renders the neighbourhood of the harbour, with its rocks and trees, peculiarly attractive. Some of the houses about are very fine; and though Sydney possesses no public picture gallery, there are several private collections, containing many good pictures, thrown open to the public on certain stated days.

Away from the harbour the scenery is by no means beautiful, and in dry weather it is positively dreary, with bare wastes in the foreground, one or two smoking chimneys showing the presence of fellmongering places in the middle distance, and the whole backed up by the dreary swamps of Botany Bay.

Fellmongering is a peculiar industry. Sheep-

skins are rotted by damp or other means, and the wool, thus easily separated from them, is washed and packed for the market. It is only, however, in the larger towns that the supply of skins is sufficient to render the industry remunerative. The numerous skins of all the many thousand sheep, killed for food or dying throughout the scattered stations of the interior, find their way to some town where they undergo the fellmongering process.

Of late there has come before the world a plan for separating the wool from the skin, and preserving the latter as a pelt, instead of destroying it. The patent centres in a composition which is obtainable in bottles. A sufficient quantity of this is mixed in a bucket with a certain amount of water, and, if our memory serve us right, of lime also. The skin is painted in its inside with this mixture, by means of a large brush, and then rolled up and left for some thirty minutes or so, when it is spread on a board, and all the wool readily scraped off; then the pelt is pitched straightway into a cask, which when full is headed in and ready for transportation anywhither.

This very simple plan is considered specially serviceable for squatters, who usually have only a few skins at a time, and who would thus be able to make

more out of them, than by the expensive process of sending them long distances to a regular fellmongering place, and then losing the value of the skins, whilst obtaining only the same amount of wool.

Sydney was founded as a convict settlement; hence the existence of the convict element in the population. This element, however, is fast becoming absorbed, and disappearing off the face of the earth, owing to the fact that no convicts have been allowed to land for many years. Moreover, a great many of the original "old hands" became wealthy, died, and left their children well educated. The next generation then being brought up, often in England, with every advantage, all traces of convictism are rapidly becoming eliminated.

Sydney possesses a University of its own; in which, however, at present, it is impossible to get that real University education, whose chief charm lies not so much in the book learning that it gives, as in that mutual intercourse and rubbing together of youths of every character with learned, clever, and good men, which proves so useful in after-life. New South Wales, though fortunate in possessing the services of several clever professors, is as yet too young to provide a sufficiently large number

of undergraduates to fill out a University to a proper size. Situated on the top of a neighbouring eminence, the University buildings form a conspicuous and handsome feature in the Sydney landscape, and a closer inspection will show them to be of a very high order with regard to size, plan, material, and finish.

The happy idea of starting what may be termed a Postal University has lately claimed attention. Such a method of education should prove an immense boon to Australia. Thousands and thousands of miles of bush country are held by the squatters, and their work, necessarily of a very isolated character, is mainly in the hands of young men, most of whom have entered on the life fresh from school, and full of aspirations. At certain odd times and seasons they have a fair amount of leisure on their hands, and this a large majority of them would probably be very glad to devote to self-improvement. At school their minds have been trained, they are in the way of working, but their new life separates them from all centres of learning. Could they but bridge over these separations by means of the post, they might continue to do a modified amount of work in some

useful subject. A board of professors forms the centre of the system, and all the instruction is carried on by letter. The idea might further be elaborated into examinations, and even the granting of degrees. Peculiarly and immediately useful would be the study of engineering, of veterinary science, of natural history, of law, and many other matters of immense benefit to the dwellers in the bush. The young "super," by devoting the leisure hours, more especially of his first three or four years, to the study of veterinary science, would assuredly become a far better manager of cattle, sheep, and horses, than if his knowledge of the subject were confined to limited personal experiences. The value of runs again is greatly enhanced by the proper storage of water, by the erection of dams, and by judicious clearing or planting. For such purposes, engineering knowledge and botany, practical and to the point, would prove of immense use. In short, many are the branches of knowledge which might be successfully studied by means of such instruction, and which in the end would prove invaluable to the success of a squatter. A Postal University might be made to form an efficient substitute for train-

ing colleges, which would be of little use in a country where the requisite amount of leisure time, at the disposal of would-be students, is so broken and uncertain that their attendance would be an impossibility, even though we leave out of the question altogether the immense distances they would have to journey to any fixed centre. "Reading by post" could be carried on at any available opportunity, and at any distances from the central authorities.

There is a curious habit to be noticed as existing throughout society in Australia; namely, that of "shouting," the popular term for drinking at one another's expense. Whenever one friend meets another, "nobblers" must be taken; and this performance, gone through on the slightest provocation, on all and every occasion, must tend to lead to drinking habits, and also, one would think, must be a heavy drain on the purse of many a young man who, in his generosity, likes to be friendly. This great propensity to be perpetually on the tipple, probably took its rise in the older days of the colonies, when men had no better ways of employing leisure time.

Picnicking is a favourite amusement with Syd-

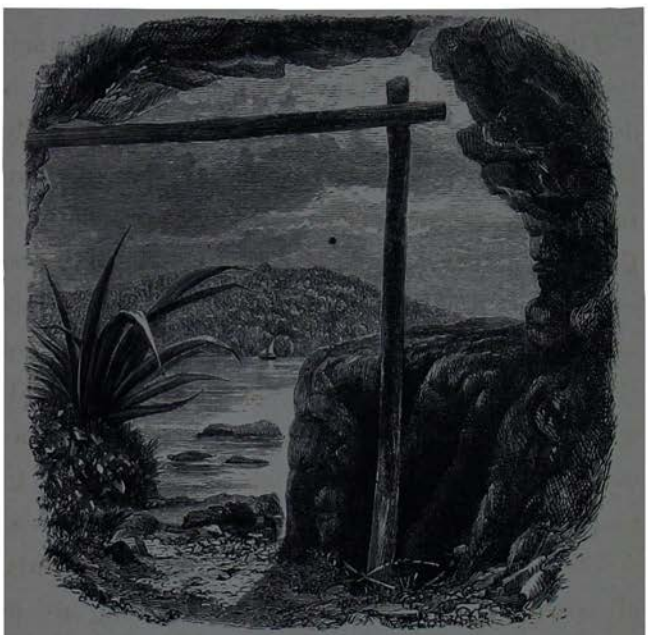
neyites. The Ministers and M.L.A.'s (Members of the Legislative Assembly) give picnics to their friends and supporters, and from them down to the poorest sweep in the land picnics, to one or other of the many beautiful spots in the harbour, are the universal occupations of a holiday.

The breeding of horses attracts much attention. In a country where nearly everything is done from the saddle, all classes must necessarily take a great interest in horse-flesh. The vast interior forms a magnificent recruiting ground, and the present stock is the result of the introduction of some of the best blood procurable from Asia as well as from Europe. The more important of the Australian race-meetings have already a world-wide fame, and there is hardly a district, however remote, which is not stirred from time to time by the excitement of periodical races.

With such great facilities as the harbour affords, all species of yachting, boating, and fishing are in high favour. Capital regattas and races are frequently held. The two yacht clubs make a very good show as far as regards numbers, build, management, and speed, though in tonnage none exceed thirty-five to forty tons. Generally

the harbour is pretty safe for boating, though "southerly busters" and other sudden squalls are often fraught with risk to the inexperienced.

The deep blue water of this harbour, though so inviting, is said to be very dangerous for



BATHING-PLACE IN SYDNEY HARBOUR.

bathing purposes, on account of the presence of sharks; and therefore portions of water have been railed in as public swimming-baths. Many of the houses along the shore have good private bathing-

places. Picture a clear pool, with a bright sandy bottom and clean sandstone sides; across its mouth a rough wall of boulders has been built, through which the water filters as the tide rises or falls. Not only is there thus a shark-proof bath, but Nature has moreover afforded a dressing-room in the shape of a cavern, in which are usually placed wooden seats and flooring, to the greater comfort of the bather.

Having thus taken a brief survey of the capital of the oldest of these colonies, Victoria, her southern neighbours must claim our attention.

CHAPTER IV.

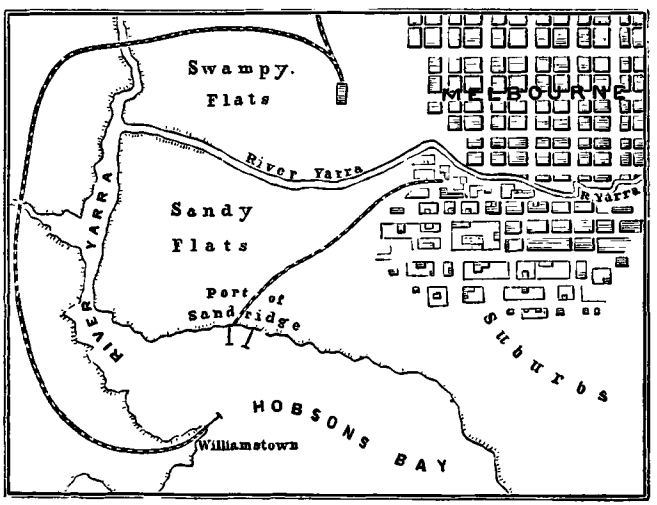
MELBOURNE.

PORT PHILLIP.—YARRA YARRA.—REGULARITY OF THE STREETS.—WATER SUPPLY.—FLOODS.—DRAINAGE TOO PERFECT.—CITY DESERTED.—CARS.

GREAT the difference between the harbours of the two capitals, between Port Jackson and Port Phillip. Sailing in from Bass's Straits between two narrow promontories, low and rocky, we presently find ourselves in a vast inland sea, the calm extent of waters bounded only by the horizon. After steaming up this Port Phillip some forty miles, the low coast on either hand becomes visible in the distance, and finally Hobson's Bay is reached. Here the river Yarra empties itself into the large lake-like sea of Port Phillip; very suddenly the open quiet of this sea is exchanged for the narrow mouth of a river; the shores all round are covered with long sheds, houses, and railways, and on either hand

run out into the water long jetties, at which lie lines of large vessels, smaller craft being able to go right up the Yarra to Melbourne itself.

Williamstown jetty, on the left, is connected with the vast up-country railways of Victoria, whilst the Sandridge piers, on the right, conduct,



PLAN OF MELBOURNE.

by a shorter route, to Melbourne itself, and are hence the favourite resort of passenger ships.

Above the piers the Yarra is entered: the river shortly becomes extremely narrow, and makes a considerable bend round a peninsula, across

whose neck Melbourne is to be seen resting on low hills.

On either hand the land is low and swampy. Soon, however, a manufactory is reached; and then handkerchiefs have to be applied to noses, owing to the strong perfume supplied to the public gratis, by certain "bone-crushing" and felmongering establishments, which gradually grow in number till they finally give way to wharves, at which lie numerous small vessels. The river is extremely narrow, and, were it straight, would much resemble a canal, minus the towpath, &c. Above this, however, it has been widened, and the coasting steamers, after wending their way through the narrows, here find ample room for turning and for making fast to the substantial quays of Melbourne proper.

The city is laid out with great regularity; the streets are of two classes or breadths, one of 100 feet or so, and the other very narrow. Running east and west are broad and narrow streets alternately, and these are cut at right angles by others running north and south. The houses for the most part are handsomely built: some of a peculiar dark blue-black stone have a curious effect.

The public buildings are remarkably fine, though mostly in an unfinished condition; well-commenced, but wisely left to be completed according to the needs of future generations. The great breadth of the streets and regularity of plan are the main causes of the stylish appearance of the city; and the gentle undulations of the ground give very good views of the various buildings.

One of the most noteworthy facts connected with Melbourne is the efficiency of its water supply. About twenty miles off is a large lake, the "Yan-Yean," ten miles in circumference, artificially dammed; and from it, in iron pipes, flows water to the city. With such force does it arrive, that there is no need for pump or other artificial means of creating a shoot, whether for the use of firemen, gardeners, or "hydranters."

Fine broad gutters line either side of the roadway, and down them flows a continual stream of water. This lends a very desirable aspect to the streets, more especially on a hot-wind day, when this broad current of water alone appears unaffected by the scorching heat. These gutters, however, usually become, more or less, lined with the *débris* of the streets, straw, paper, &c., giving

them a sadly unkempt appearance. Moreover, they are liable to overflow. We have only to quote from the *Melbourne Argus*. After the description of the gradual approach of a thunderstorm, we read :—

"Soon all the gutters in Melbourne were running over the pavements, and the lower end of Elizabeth Street, from Collins Street to the Melbourne and Hobson's Bay Railway, became a sheet of raging water, covering all the foot-bridges, and rapidly converting the intersection of Elizabeth and Flinders Streets into a turgid lake. The stream swelled and gained in extent, until Flinders Street, from Degraves's warehouses to the Falls Bridge and some way beyond, was a perfect river, varying in depth from a foot in the middle to four feet in the side-channels. The passengers arriving in town by the various suburban trains gathered in the verandah of the railway station at Flinders Street, and passed some time in watching the progress of the flood. Several persons, anxious to cross from the town side to the railway, doffed boots, and rolling up their trousers boldly waded across. One of these adventurers narrowly escaped being washed away by the flood, as he

got into the channel and found himself carried off his legs, so that he had to strike out and swim; but he got safe off with a complete soaking. The cabmen also did a good deal of business in conveying people across the streets, though the water was in some cases up to the bellies of the horses. A little dog, which was following its master, who was in a cab, excited a considerable amount of compassion by its game though painful struggles to keep on its legs and out of the deep water; but it was at last rescued when almost exhausted by its struggles. The flood was at its height at half-past five, and from that time fell as rapidly as it had risen, till at six o'clock the gutters were merely a little more flushed than usual. However, a thick coating of black, slimy mud covered the foot-paths, for a long time after the water had subsided, and the foot-bridges were choked up with dirty *débris* of a very mixed character. During the great rush of water long planks were hurried along the stream, and the cabbies and drivers of other vehicles had to take great care that these did not come in contact with the horses; one cab-horse being nearly thrown down by a piece of timber striking it square across the fore-legs.

"One of the first things that sailed away was part of the framework of a table erected over a gutter, and used as a stall, at a spot where usually a large business is done on mail-days in the sale of 'summaries.'" [Summaries being the condensed news of the month printed by the several papers for postage to England, and sold, ready stamped and done up, at numerous stalls by old women and others, who likewise provide pen and ink for the address.]

"One man seemed to think walking over the bridges, though they were well under water, a tame affair, and boldly dashed into the gutter, where the stream was running with greatest force. Luckily for him, there was a cab going through at the same time, and he was able to catch hold of the back step before being completely carried off his feet."

Such floods as these arise from the almost perfect surface-drainage causing the waters so quickly to leave the higher parts of the town, that even a heavy shower is sufficient to inundate the lower parts.

Melbourne boasts several "reserves" for public recreation; but they are none of them kept in a

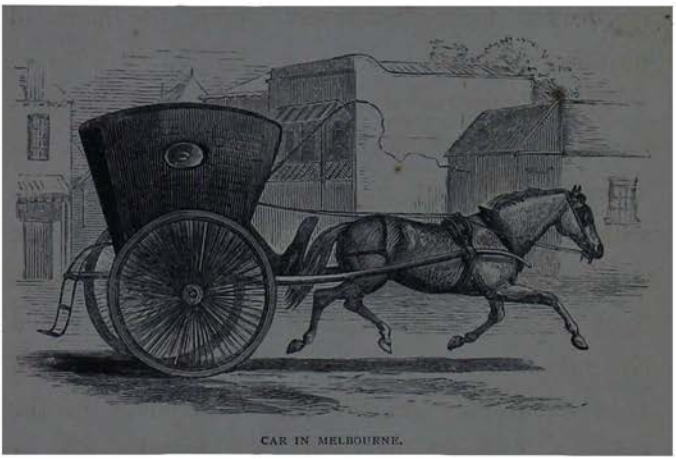
very high state of order. Even the Botanical Gardens, possessing trees and shrubs good enough in themselves, flower-beds and glass houses containing interesting collections, yet present a neglected, wild appearance, contrasting unfavourably with the public garden of Sydney or of Hobart Town; the latter a really exceedingly well, rather too strictly, kept garden, and the former all that could be desired for public resort among the manifold beauties of Nature.

Throughout the day both fashion and business crowd Collins Street to overflowage. To the stranger this fact appears utterly irreconcilable with the totally deserted aspect of the same street immediately after dusk. In truth, by gas-light Melbourne throughout appears a deserted city, save alone in the crowded thoroughfare of Bourke Street. As all the world lives in the suburbs, if at all attracted back to the city at night, it gravitates perforce to Bourke Street, as being the head-quarters of all theatres and other places of amusement; often so densely crowding its pavements, that locomotion becomes a matter of considerable difficulty.

The Yarra, narrow as it is above the shipping,

is yet much used for boating—several rowing-clubs existing, and making a good show of four-oars, scullers, &c. Pretty shady walks are being formed along its banks, as far as the Botanical Gardens, some way out from the city.

In Melbourne the normal form of the species cab is unknown, its place being supplied by a local variety termed "car," somewhat resembling



CAR IN MELBOURNE.

a large, roomy, two-wheeled dog-cart, surmounted by a curved roof, with curtains therefrom pendant; the whole drawn by one horse.

In so warm a climate, this forms a pleasantly cool and breezy means of conveyance. Not only do cars perform the duties of cabs, by standing

on a stand ready at all times, but they have successfully supplied the place of omnibuses, certain of their number starting at short intervals from stated points for the various suburbs. The driver, as he jogs along, exercises his lungs by proclaiming aloud, at intervals, whither he is bound.

CHAPTER V.

GOLD DISTRICTS.

GOLD TOWNS.—NO TREES.—SOUTH AUSTRALIA.—QUEENSLAND.—ADELAIDE FLOUR.—EDEN.—SHIPPING CATTLE.

WHEN one compares the huge size of Melbourne with the small amount of territory possessed by Victoria, one is prompted to go elsewhere than to squatters and farmers for the cause of so much prosperity; and thus one is driven to the diggers.

There are in Victoria some eight gold districts, each containing one or more large and thriving towns. A journey direct from Melbourne by train lands us in Castlemaine, the centre of one district. The town itself is remarkably clean and neat; the country round is cut up by the water works and holes of the gold diggers, who have apparently stripped all the country round of its timber, thereby giving it a wretchedly bare appearance. A coach runs from Castlemaine to Ballarat: the country

passed through is remarkable, and differs greatly along the route. In some parts it is thickly wooded; in others it opens out into undulating plains, with curiously abrupt hills jutting up in all directions. These hills are evidently volcanic, as is shown by the pumicy nature of a Cornish stone wall which skirts the side of the road. All this volcanic region abounds in wheat fields, and at harvest time lots of men are to be seen travelling about looking for work, with their swag, *i.e.* blanket, rolled up neatly into a bundle, some six feet in length, the two ends being tied together, and the whole carried either over one shoulder and under the other, or over the head; and then in one hand they invariably carry their "billy," or quart tin pot, wherein to make tea.

We soon leave the farmers, the gold districts are again entered, and we approach Ballarat. A good broad road, with wooden fence on either side; more public-houses, more people, more vehicles, and here and there some huge "workings," surrounded by great mounds, much resembling young railway embankments, and of all sorts of colours, bright white quartz, red, blue, brown earths, &c. &c.; all indicate the neighbourhood of the great gold town. The country is slightly undulating, and reminds one

much of the entry to Bury St. Edmunds or other country town, but for the heat, dust, and appearance of the huge gold workings rising everywhere, even in the midst of the houses.

In the various gold towns are to be found first-class hotels, shops, and public buildings of various sorts, though the country round has a most distressingly barren appearance, owing to the nearly total absence of trees, they having been cleared for firewood, and also for the woodwork of shafts, and for other mining exigencies.

The three remaining colonies on the "Big Island" of Australia, merit more description than our space would allow. Their size, their present importance, and their probable growth, are aptly illustrated by the fact that the imports and exports both of South Australia and of Queensland have already reached the sum of five millions sterling per annum.

These two colonies are well known from the existence in them of two of the richest copper mines in the world—Burra Burra and Peak Downs. Moreover, in those vast districts in their interiors still untenanted by white men, explorers have positively met with native copper lying on the very surface.

In Queensland, too, gold is constantly turning up, and her diggings are rapidly rivalling those of the neighbouring colonies. At Gympie, for instance, 140 tons of stone have yielded 1840 ounces of gold, the stone being taken from a depth of 150 feet.

Queensland offers as suitable a soil and climate for tropical products as does South Australia for wheat. In the former some 20,000 acres are already under sugar and cotton, whilst tobacco and other cognate productions are rapidly coming to the front. "Adelaide flour" is already a household term in the colonies. In evidence of the capability of Queensland as a pastoral country stand the facts that sheep have increased, in ten years, from three to nine millions, and horned cattle have more than doubled their numbers.

Having now glanced at the five colonies of Australia proper, let us cross over to the neighbouring islands, and, hailing for Tasmania, we soon find ourselves steaming out of Sydney Heads in a comfortable steamer, with the varying coast on our right; and having proceeded for some twenty-four hours, we have put into a place called Eden, a curious New South Welsh township, built chiefly on a promontory, which divides a large bay into two

divisions, and gives it its name of Twofold Bay. We passed the town on our right, and moored quite close in to the sandy beach of a small cove, the sea continuing deep to within a few yards of the shore. Water had cut its way through the steep wooded ridges round into this little bay, leaving a steep gorge almost hidden in the thick growth of gum-trees and various shrubs, grasses, and creepers.

Wind and sea have drifted in a large quantity of sand, and have thus formed a handy platform, a sort of natural wharf, on which have been erected a series of stock-yards, in which we perceived some seventy head of fat cattle, which we were to take on board. The operation of embarkation was accomplished in a rather remarkable manner.

On shore, some six or eight head would be draughted from a large yard into a small one; then one of these would be urged into a small stall or "bail;" a gate would be closed behind him, and a noose slipped over his horns, the lanyard of which was passed out between a post and a gate which opened on to the beach, but which was kept shut till the proper moment. On board, a donkey-engine was busily at work with a crane and sling, which was connected with the bullocks by means of a boat. A

stout line was passed from the steamer to the shore. In the stern of the boat was erected a sort of sheers, some three feet in height, projecting over the water. A long light line was coiled down in the boat, one end of which was fast to the barrel of a winch connected with the donkey-engine. Then three

GETTING CATTLE OFF TO STEAMER.

men in the boat hauled her ashore by the stout line, paying out the light line as they increased their distance from the steamer. When they reached the beach, they passed the end of this light line to those on shore, who immediately connected it with the noose round the bullock's horns; the boat was

then hauled out clear of the shore, and the engine set to work at the winch. The door of the bail was now opened, and the bullock would rush out, and struggle hard to make for the bush, plunging and "bucking" about all over the beach, though the line steadily, but surely, drew him on towards the water, into which the beast would give a few vigorous leaps; then, finding no bottom, he would attempt to swim, but finally, some irresistible power taking him along too fast to allow of his doing so, he would apparently give himself up for lost, and be towed through the water, rolling over and over.

As soon as he was well clear of the shore the engine would stop, those in the boat get hold of the line, and haul till they brought the beast's head up out of the water under the sheers over their stern; and then they would make the line fast in the bows of the boat.

The engine would set to work again at full speed and draw boat, beast, and all, at a tearing pace through the water to where the sling was hanging over the vessel's side, in readiness to be slipped under the beast, which was then whipped up by steam over the side, and down the hatchway, to its stall between decks.

Perhaps the chief feature in the township of Eden is the number of public-houses; not, however, in work, but all in a more or less ruinous and deserted condition, they having been "run up" to supply a "rush" of diggers to a new gold field, which was discovered in the neighbourhood, though it eventually proved to be worth nothing.

After a day or so spent in wandering aimlessly about this southern Eden, whilst the cattle are being embarked, we get up steam again, and are soon abreast of Cape Howe, the south-eastern corner of Australia.

CHAPTER VI.

TASMANIA.

CAPE PILLAR.—ENGLISH GREEN.—HOPS.—TROUT.—COAST SCENERY.—CONVICTS.—ABSCONDERS.—PAVEMENTS.—TASMAN'S WOODEN LEG.—THE JORDAN.

FROM Cape Howe we stand on some hours across Bass's Straits, and gradually come in sight of those outlying islands behind which looms the high land of Tasmania. The coast becomes plainer and plainer, and, having passed Maria Island, the steamer steadily draws near the magnificent scenery of Tasman's peninsula, culminating in Cape Pillar. Precipitous cliffs of stratified rock here give way to a magnificent headland of basalt, with its regular columns supporting a scanty crown of low scrub. Columns run out in a south-easterly direction to a point, off which an isolated clump, of some three or four, still braves the forces of the great southern swell.

Just round this point lies "Tasman's Island,"

a huge flat-topped block of basalt, from whose south-eastern corner a narrow ridge of columns runs out into the sea. It is difficult at first to realize that these columns and fluted walls are not the work of men's hands. Did this island exist off Cornwall, it would most assuredly have been at one time the residence of King Arthur.

From this point, far away to the south, is just visible the high land which forms the opposite "Head" of the entrance to Storm Bay—the magnificent estuary of the river Derwent.

Having rounded Cape Pillar, the shore, with its cliffs, rocks, and tree-covered mountainous ranges, recedes until it again fronts us in the shape of another cape, by name "The Raoul," than which it is impossible to imagine a more sublime specimen of basaltic architecture.

Storm Bay is marvellously prolific in the ramifications of its blue waters, which can only be satisfactorily viewed from the top of one of the high mountains in its neighbourhood. After passing on the right hand an island deriving its name, "Lady Franklin Island," from its original possessor, the wife of Sir John Franklin, the then governor (who presented it to the colony for the special

use of the Acclimatization Society), the channel becomes suddenly narrow, and the river Derwent is entered.

On the left are high wooded ridges more or less cleared and cultivated up the slopes, whilst on the right the land is lower and not less cultivated. Ahead, tree-covered lofty ranges lie in confusion, and on the left is presently seen the town of Hobart, lying spread over low hills, its quays in the foreground, and overshadowed inland by the huge mass of Mount Wellington, which, rising out of the woods, terminates in a rocky ridge more than 4,000 feet above the river.

Of all the Australias Tasmania reminds one most of home; owing to its latitude, all English plants flourish luxuriantly—in fact the wild briar has become a great pest. Hawthorn hedges lend their beautiful green, and all around English plants refresh the eye, wearied by the brown and burnt-up appearance given to the land on the big island by the presence of gum-trees.

Tasmania thrives on providing fruit for, and entertaining visitors from, the other colonies. All valleys and gullies in the neighbourhood of Hobart Town are planted thick with the fruit-bearing trees

and plants of England; and strawberry gardens are especially plentiful. Sydneyites and Melbournites flock to this temperate garden of the colonies during the hot summer months.

Up the river Derwent is a great hop-growing district, in the midst of which, near the junction of a rushing creek with the river, are situated the salmon ponds which have successfully reared, from our brown trout, salmon trout, and possibly even the king of fish himself.

Owing to the wooded and rocky nature of the banks of the Derwent, much sport has not as yet been had, though doubtless fishing interests will in future days be diligently cared for, inasmuch as they would form a grand prop to Tasmania's great industry—the entertainment of visitors.

Hobart Town, the capital, much resembles a clean quiet English county town; there is little or no sign of commerce or speculation of any sort.

A regular old English coach carries the traveller along a fine road, originally made by convicts, to Launceston, a great port in the northern part of the island, whence steamers run across to Melbourne in twenty-four hours.

Tasmania abounds in interesting natural features, and boasts easily accessible wildness. A lover of coast scenery, or one wishing to gain a view of magnificent bush-trees, 300 feet in height, and such-like little peculiarities of the place, should visit Port Arthur.

This settlement was originally a convict establishment of large size, and there are still a few convicts there. It is situated on a peninsula, many miles in extent, but connected with the mainland only by a narrow neck, or isthmus, which is barely 100 yards in width. This neck is simply a bank of sand drifted up by the sea and wind.

The peninsula is very wild, chiefly consisting of mountainous ranges covered with dense scrub and gigantic gum-trees; and in this are animals and birds of all species indigenous to the country. At the present time there are some 300 convicts and a number of constables and officers, and all is kept in strict discipline and order. Formerly there were many thousand prisoners, but for some years no fresh batches have been sent out, and so the number has dwindled, and in a few years the establishment is to be done away with altogether.

Communication is kept up all over the place by means of semaphores, *i.e.* posts with moveable arms, planted on the tops of hills.

With these arms any number can be made, and at each semaphore is placed a reliable convict and a book, in which latter are numbers with words

SIGNAL SEMAPHORE AT PORT ARTHUR.

and sentences corresponding to them; and so the signals are worked.

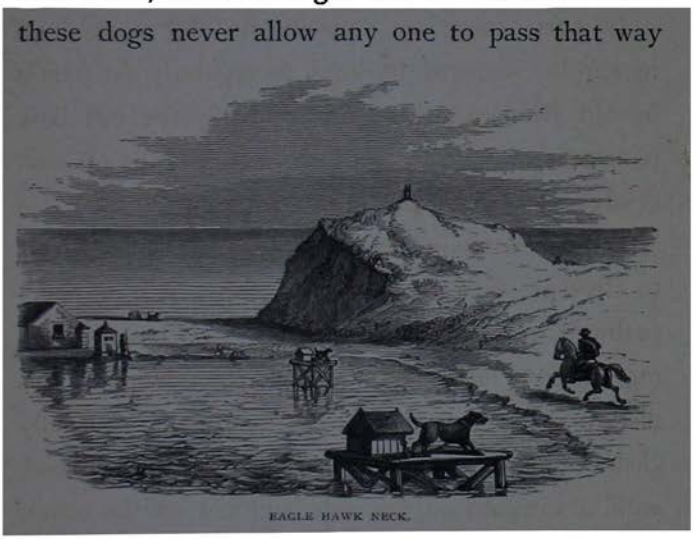
The convicts are left with no chance of escape; and though they occasionally abscond, and retire into the impenetrable bush, they never get off clear from the peninsula. One man got away, taking with him a kangaroo dog belonging to one

of the officers and a small supply of provisions, including by chance a few potatoes. He made his way through the dense scrub for some distance, then cleared himself a space, built a little hut, and planted his potatoes. By the aid of his kangaroo dog he managed to keep his larder well stocked with animal food. Meantime his plans were these: he hoped by thus lying hidden for a while to lessen the vigilance of pursuit, and also to gain time to knock together and launch unobserved some kind of boat in which he might gain the mainland. But, unluckily for his project, an energetic constable once caught sight of the kangaroo dog out on its hunts, and managed with considerable difficulty to follow it on its return journey to the convict's hut. After this discovery the absconder's holiday was at an end.

Another gentleman having attempted a similar flight without the aid of either kangaroo dog or potatoes, could obtain but little food in the scrub, and his exhausted energies could only carry him a short distance through the tangled masses of vegetation. Accordingly, he was soon tracked and discovered in a semi-living state, prone on his back and utterly exhausted. The parental care of

his Government soon restored him to a life of forced industry.

At the neck, or isthmus, of Tasman's peninsula there is a strong guard of constables, ably supported by an array of dogs kennelled in every conceivable nook; some on stages out on the water: and these dogs never allow any one to pass that way



EAGLE HAWK NECK.

without joining in barking chorus, and putting the guard on the look-out.

Moreover there is a well-managed boat department, each boat being manned by five or six convicts, and officered by a constable-coxswain accompanied by one constable-guard. On this work only convicts of the best character are employed. They

guard the shores of the peninsula to prevent escape by water, and, at the same time, are of use in providing the settlement with fish.

In the neighbourhood of the isthmus, which bears the name of "Eagle Hawk Neck," is some most splendid coast scenery, all more or less basaltic.

In parts there are "pavements," all marked off in regular patterns by lines, as regularly as if built by old Romans: these are probably the old base pedestals of basaltic columns which, through successive ages, have disappeared.

Elsewhere round a bold headland one comes to cliffs of stupendous height, with a sort of rocky pathway, or road, running along their bases, forming there a broad, flat terrace. In one place this terrace is cut into by a very deep and beautifully clear canal, as it were, looking indeed artificial, with a towpath on one side and not on the other, running through a long tunnel right under the cliffs to the other side; and through this, in windy weather, sea, foam and spray dash with grand effect.

Beyond this again, one comes to a large basin in the cliffs, exactly resembling a huge and cyclopean dry dock, so regular is the basaltic masonry. Many are the visitors who have come away with

the idea that this was the commencement of a huge undertaking by convict labour, to supply the *Great Eastern* with a dry dock in the southern hemisphere. The features of this part of the coast are of portentous dimensions, such as are rarely met with in accessible places.

On the shores of the wide-spreading sandy bay near Eagle Hawk Neck, in a flat pavemented rock, exists a most wonderful historical monument, proving the physical peculiarities of a great discoverer, as well as the time and place of his landing in a country which has since inherited his name.

Now, all is hard rock where, when Tasman landed, all must have been mud. For, indelibly preserved, one sees the mark, not only of a large boot pressing into mud, but also by its side the step of the wooden leg which, it is thus incontestably proved, formed Tasman's second limb. Clever archæologists account for the non-appearance of further footsteps shorewards, by maintaining that Tasman fell backwards into the water or boat, overcome with the magnificence of the scenery before him.

Hobart Town may be described as the water-

ing-place of the colonies, and hence, out of the season, all but the perennial residents are gone. And they, though most hospitable and kind to strangers of every degree, are sadly at variance among themselves, all split into factions, cliques, and sets. This state of things greatly detracts from the natural charms of the place, which would otherwise be far more enjoyable. Of course, during the season, the locality becomes crowded with Australians, and factions are, for the moment, less discernible.

Before we take leave of the beautiful island of Tasmania, let us remark that, although in all colonies we find the names of places in the old country adapted to the new settlements, here one is specially struck by the fact of these names existing to the nearly total exclusion of all native appellatives. Starting from Hobart Town, northwards, one comes upon Buckinghamshire, Monmouth, Cumberland, Somerset, Westmoreland, Cornwall, Devon, and Dorset, through Richmond, Brighton, Tunbridge, Lincoln, Perth, Exeter, and York. Then Melton Mowbray flourishes, and in its neighbourhood one can cross the Jordan, and go to Jericho and various Israelitish places.

CHAPTER VII.

ISLANDS.

THE FEEJEES. — COTTON. — ANNEXATION. — HILL-TRIBES. — NEW CALEDONIA.—LORD HOWE ISLAND.—THE CHATHAM GROUP.

OF the islands lying around Australia, before considering those of New Zealand, we may glance at the smaller groups, at the Feejees, New Caledonia, Lord Howe, and Chatham.

Still under native sway we find the Feejee Islands, situated some two or three thousand miles north-east of Melbourne. They have lately attracted much attention among Victorians. Though of small extent, and peopled by not the most agreeable of savages, they offer singularly brilliant prospects for cotton-growers; and the more enthusiastic Melbournites have already started the idea of planting there a Victorian colony; while, among the men of Sydney, are some who look forward to the profitable annexation of these fertile islands.

The Feejees, by their climate, position, and soil,

are reputed first-class ground for the cultivation of "Island" cotton. At present they are inhabited by natives of lively temperament. On the larger island, the men of the interior, the powerful hill-tribes, have been known to visit the plantations of a European, and to destroy all his black labourers hired from neighbouring islands. However, not only do they not molest the white man at all, but they actually take particular care of all his property, even to the handing back to him the tools which his labourers, at the time of the incursion, were using in his plantations. Thus, though they have no personal enmity to the white man, they are apt to ruin his crop by depriving him of hired labour at the critical seasons.

The islands are occasionally subject to all the fury of inter-tropical cyclones, which, of course, do much damage. Among the many islands of this group communication is kept up by boat, and fish is obtainable in abundance.

There exists an old chief who has set himself up as king, and who much affects European customs and inclinations.

The islands are not large enough to form a separate colony, but might become a very desirable

adjunct to some neighbouring land of larger size. White men are rapidly gaining ground, especially as planters, on all these islands; and doubtless, at no very distant date, the Feejees will be entirely inhabited by European stock.

New Caledonia is of small size, and held by the French as a penal settlement. Reports of the existence in it of gold have attracted the attention of Australians.

Lord Howe Island, discovered soon after the settlement of New South Wales, is 400 miles east of Sydney. It is about seven miles in length, though narrow, being in some parts only half a mile wide. However, two mountains at its extremities attain heights over 2,000 feet. Its origin is due in part to volcanic action, and in part to the coral insect. There are some thirty Europeans settled on it, who seem quite contented with their wave-girt home, and who are all more or less connected with the whaling interest, supplying the ships with vegetables, fresh meat, and water. The climate of the island is almost tropical. The vegetation is not like that of Australia, but more resembles that of Norfolk Island, with its palms even on the tops of mountains. There are enormous

specimens of the Ficus, rivalling the Banyans of India in their endless trunks and plantations, produced from one parental stem; but none of the graceful grass-trees or unvarying, dull, melancholy gums of Australia occur there.

Goats, pigs, rats, and mice run wild; the wood-hen, indigenous to the islands of the South Pacific, is still found, though its usual companion, the large pigeon, is supposed to have become extinct since the occupation of the island. The only direct communication between Lord Howe Island and civilization is carried on by means of a small vessel of fourteen tons, which exports chiefly onions to Sydney, and returns laden with tea, sugar, news, and other articles.

To the eastward of New Zealand lie the Chatham Islands, to which the Maori prisoners were formerly sent. So small is their extent that they only afford grazing ground for one or two sheep stations. The Norfolk Island pine has been introduced with such success, that it has now become one of the chief features in the scenery.

These two latter groups of islands belong to the English.

CHAPTER VIII.

NEW ZEALAND, LOCAL.

CAPITALS. — ALPS. — PLAINS. — LYTTELTON. — CHRISTCHURCH. — WATERCRESS.—ARTESIAN WELLS.—CROSSING RIVERS.—FERRYING OVER.—TRAVELLING OVER THE PLAINS.

AFTER about five days' steaming to the eastward of Australia, one comes in sight of the various snow-capped mountains of New Zealand. The islands occupied by the colony possess about the same acreage as the British Isles, viz. seventy million acres, their value equally enhanced by a coast-line of three thousand miles, abounding with bays and harbours. They have likewise a very similar climate, though certainly a trifle warmer.

The capital of the colony, Wellington, does not bear comparison with the splendid capitals of the colonies in Australia, seeing that it cannot, like them, lay claim to being the main port of its colony.

New Zealand, owing to its geographical conformation, is divided and cut up into several "provinces," and smaller portions termed "counties," each possessing its own government, its own capital, and its own port. Thus produce is shipped off straight from its native province, and there is no central port to enable the growth of a large city. More especially in the Middle Island this splitting up of capitals is still further carried out, inasmuch as almost every chief city of a province lies inland, having, in its port, another large town: therefore even the capitals of provinces are by no means so large as they would be were they also the port of their province.

Had some of the many cities of New Zealand — Auckland, Dunedin, Wellington, Christchurch, Nelson, &c. — been clubbed together, a single capital city of very great size and importance would have been the result; but, owing to the favourable nature of the country, every part of the two islands is within easy reach of a good port and tolerably large city.

People may boast of man's possession of reasoning powers, but it is well known that, in the logical acceptation of the term, he very frequently

shows himself lamentably deficient in them: take, for instance, the extraordinary influence exerted by prejudice on the judgments of his mind. Is then our judgment at all affected by such prejudice when we declare Canterbury to be by far the best province, and that we therefore feel compelled to enter a short description of it? Our excuse shall be that such an account may go some way towards conveying an idea of New Zealand generally.

Along the western side of the Middle Island run the mighty "Alps," attaining elevations of 13,000 feet. The scenery there is perfectly alpine —there are vast regions of snow, and many glaciers, one of which is twenty miles in length by three in breadth; therefore far exceeding in size any in Switzerland. Waterfalls, of all sizes and sorts, abound in every direction.

About the middle of the island, stretching from these Alps eastwards to the sea, lie extensive plains, perfectly flat, thirty to forty miles in breadth, and containing some three million acres of land. They are composed of *débris* washed down from the mountains, flattened by the sea which, subsequently, courteously retired to enable man to start a rival in wheat-growing to California.

The seaward edge of the plains is formed by a long sea-beach, on which rolls a heavy surf, thereby preventing the shipment of grain or other produce. Old Vulcan noticed the fact, and accordingly set up, about the centre of this long beach, a nice little volcano, which spread its lava and rocks around, raising a clump of hills, some of which attain a height of 1,000 feet. These now form a peninsula, abounding in old craters, rugged rocks, and streams of lava long cooled, which, in spite of their being covered with yellow grass, have, through their remarkable forms, the most striking resemblance to lava still flowing.

In one place the sea rolls in between grass-covered downs running steep into blue water, with rocks peeping forth here and there, until it finds itself in a large basin; and in one corner of this lies Lyttelton, the port of Christchurch. This town is very prettily situated up a steep valley. The great majority of buildings are, or rather were, of wood, for a large fire has lately made sad havoc among them. In some houses, considerable taste and skill are displayed in architecture and adornment; others are nearly hidden in masses of bright green English trees.

On going up the hill-side, a curious view of the harbour is obtained; it has exactly the appearance of having once been a huge crater, though now filled up with bright blue water, and ready to accommodate any number of ships. Landing at the quay, one finds a railway-train immediately on the wharf. Far different to the condition of things a few years back, when two well-known bishops made good use of their University education, in pulling themselves and families ashore in the ship's boats. Now, half-a-crown is invested in a ticket, the comfortable saloon-carriage is entered, the train starts, and is immediately enveloped in a tunnel: while slowly making our way through it, we hear that it cost the province 230,000*l.*, and that it is as long as the celebrated Box tunnel in the old country.

Formerly, the port was connected with the capital only by a single road, which was made with great difficulty, and, owing to the nature of the country, it had to follow numerous bends and twistings; and what with the steep hills and dales it had to cross, it formed anything but an easy means of communication. This circuitous route is now almost entirely abandoned to excursionists,

who travel it in order to enjoy its many magnificent views.

We should continue in a sort of stupor of astonishment how so small a place as Canterbury could carry out so grand a work, did we not suddenly emerge from the darkness of the tunnel on to bright, light plains. It would be no heavy tax on the imagination to persuade oneself that the darkness had been the gradual closing on of sleep, and the return to sunlight a mere dream of being once again in England.

Our eyes, blinking at renewed daylight, are refreshed on all hands with green, real English green; hedgerows, and plenty of water, and cottages and small houses of every description, surrounded by clumps and rows of poplars, hawthorns, and other English trees; and this continues all the way to the capital, Christchurch. This pretty town, or rather city, for it is the special diocesan capital of the Primate of New Zealand, nestles all hidden in English trees, whilst round and about run magnificent roads, shut in on either side by hedgerows of gorse, thorn, and broom. Owing to favourable climate and soil, Christchurch, which at its first foundation rose from a bare plain, now appears as if set down in

cleared land in an English wood, through which have been cut broad roads. The immediate centre is the only part entirely without trees, and there we find rows upon rows of shops, usually with verandahs in front. Banks, merchants' offices, and all houses, with but few exceptions are well built, of wood, as that material gives to the frequent shocks of earthquake a result not attainable in brick or stone. But wood burns; and therefore insurance companies have that much influence, that every bad fire causes brick or stone houses to rise from its ashes, though the shocks of earthquake necessitate their being erected of great and expensive solidity.

There is a very pretty river meandering through the town, clear and swift—soon to be full of trout, which are being bred in ponds in the Acclimatization Gardens. Some of their number are supposed to have reached the river before their time, through holes reported to have been made by hungry eels, who had bored their way from the river to the ponds.

This Avon is the river which originated the stories of the enormous increase of watercress; for in it, for some reason or other, this plant grows

marvellously and in rank luxuriance. Higher up the river, at certain times, it will be seen to fill nearly the whole channel; the current, really some three feet in depth, will barely show as many inches of water flowing over the tops of the dense growth. I have seen cows on warm days wander in to cool their heels, and suddenly meet with an unexpected bath. They leave the trefoil of the meadow for the watercress on the immediate margin, step into the apparently shallow water, immediately sink down several feet, and occasionally have much difficulty in regaining *terra firma*. Frequently the stream becomes so choked with this plant that the upper portions are flooded. Paragraphs appear periodically in the newspapers, maintaining that the luxuriant growth of this much-abused plant contains material for the support of a new industry. Watercress, when dried and properly prepared, is said to possess all the good qualities and properties of tobacco, yet none of the evil of that weed. Doubtless, ere long, some energetic New Zealander will put the whole matter to the test.

The Avon much resembles our Oxford Cherwell, only clear and perfectly free from mud, winding

over flats, among weeping willows, meadows, and fat beasts. Its water is of particular value, and is greatly used in the numerous breweries which exist in Christchurch, and whose beer is excellent. More water is derived from Artesian wells, which are to be found on all hands; they number six hundred within the town itself; and thus about every house will be found several jets of perpetually running water—a blessing unknown to the highly civilized inhabitants of London.

The railway runs out from Christchurch in various directions, and is still progressing. The plains are readily traversed: being very flat and composed of firm gravel, they offer a ready bed for the sleepers, and no embankments or cuttings are needed. No doubt the lines would ere now have reached the other end of the plains, but for the numerous rivers, which cut their great channels across them. Rain, cold, or heat, every approach to extreme weather, causes them to become more or less flooded; for not only do they receive the waters so readily drained from the mountains, but one of their great sources of supply is in the snows and glaciers of the higher altitudes. Such rivers are specially difficult to cross, as they come

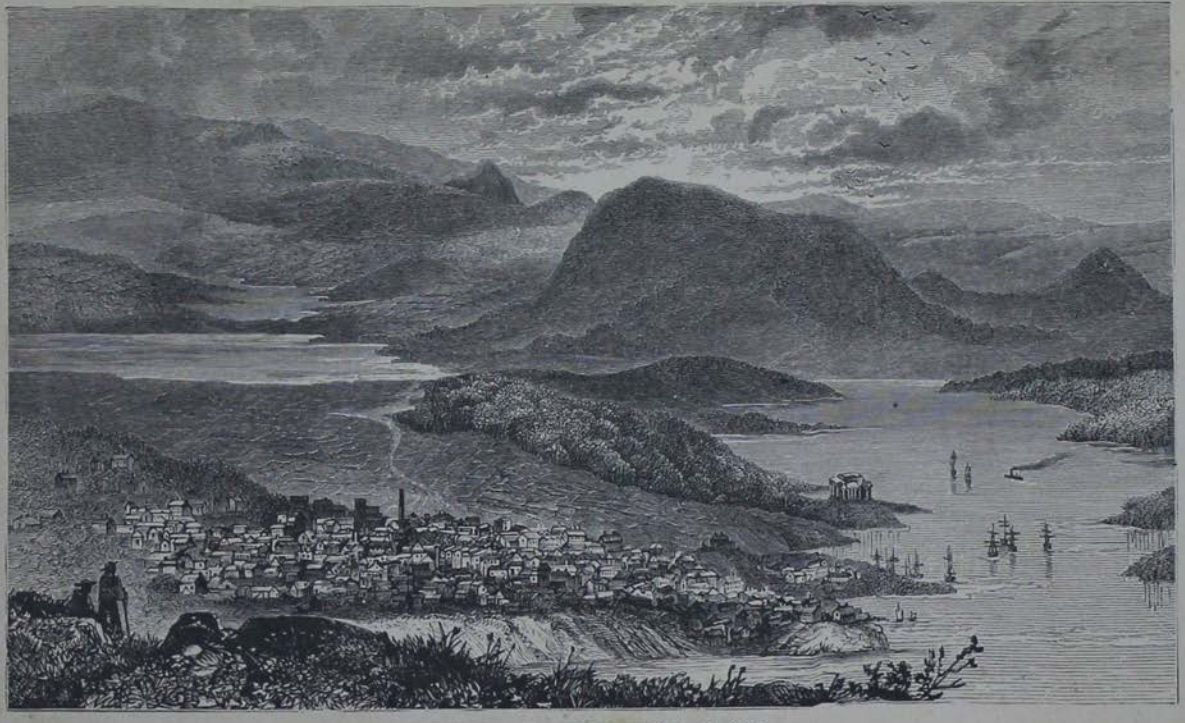
down at a very quick pace; their beds are broad and shallow, and full of boulders and big shingle, ever shifting.

On one occasion the passage of the river Rakaia was accomplished as follows:—The coach pulled up at three or four wooden, barn-like buildings, standing alone on the dreary plains, with one or two hens, one or two dogs, one or two cats, one or two women, one or two men, one or two children, and one or two old and cracked specimens of various articles as their only accompaniments. To the north was plain; then low mountains in the distance, on which the sun still shone; to the east was plain for some miles, and then sea; to the west, plain and lofty mountains; and to the south a mile or so of shingle, a broad stretch of dirty white water, running swiftly, then a bank, and a pitch-black rain-cloud spreading right across the picture, with lightning and thunder. On alighting to stretch our legs we found that, though the endless telegraph posts carried a single wire straight on into the dark distance, the road ended abruptly, for we had reached the river bed. Soon, however, the coach again started, and, suddenly turning to the right, jolted over the shingle-covered plains.

The increasing size of the boulders and inequalities of the ground shortly obliged the coachman to pull up; the passengers and men with the mail-bags now started on foot, and walked a long way up the bank of the river, which was evidently "coming down," *i.e.* in a flooded state.

When this is not the case, a sort of long light waggon fords the river; and so passengers and mail jolt across, to join another coach at the other side. But in the present instance the river was too high for this operation, and we were to cross in the ferry boat, which we now accompanied, as it was towed up the bank by a man on horseback.

The river was a mile or so in breadth, and running pretty strong in many currents, between shingle beds and shallows of all sorts. When about two miles above the scaffolding put up to begin a bridge, we entered the boat. She was flat-bottomed, square at the stern and sharp at the bow; triangular in shape. Two men set to work and pulled her obliquely across one current, and so landed us on a shingle bank in the midst of rushing waters; and while we waited there, striving to knock over with stones gulls and terns, the two men laboriously towed the boat up one side of the



HOBART TOWN FROM MOUNT NELSON.

bank: we re-embarked and obtained a good start across the next current. With the accompaniment of frequent showers of rain and hail and tremendous wind, we gradually managed to edge across the river, now grating over shallows, now drifting down currents, turning round and round; at last we reached the opposite shore, close to where the bridge was being begun. Here we entered the ferry waggon, and were jolted up to a small wooden erection, where stood our new coach. It is hoped that now a safe and practicable means has been found of bridging these rivers, by means of iron tubes of large diameter sunk, in place of piles; and, once bridged properly, the rivers will no longer check and hinder locomotion.

The farmers are rapidly ploughing up the plains; and, meanwhile, whither they have not reached the squatter feeds his sheep, right away from the low-lands to the verge of the snow. And it is up there that, if the snow comes on early or suddenly, the notorious losses of sheep take place.

This vast extent of plains does not present many objects of interest to those riding across them. Along the main roads one gets into a habit of—by means of the endless telegraph posts

—rubbing up mental arithmetic; now calculating how many one passes in a given time, now counting the number of paces a horse takes between a given number of posts: these and various other exercises prove of great use in relieving the monotony of the road. On these plains mirage is always more or less present, and its curious deceptions are often of great interest. Its power of magnifying and elongating objects may at times have converted a turkey or a goose into a moa: men in the distance appear like tall trees, and sheep like huge cows.

The only natural features of any note are the beds of the rivers cut deep in the flat plain, the two banks on either side forming the exact semblances of railway embankments, with a mile or more of water-worn shingle between them.

CHAPTER IX.

NEW ZEALAND, SOCIAL.

SPARS.—MISSIONARIES.—GOLD.—MAIL ROUTES.—MAORIES.—SNOW.—WIND.

NEW Zealand was colonized under perfectly different auspices to Australia. Its capabilities for profitable colonization attracted the attention of Benjamin Franklin, who zealously advocated its settlement. Those engaged in the whale fishery first effected a footing in the country. For the provisionment of their vessels it proved invaluable. Situated close to their fishing grounds, it afforded numerous safe harbours in which they could readily obtain water, and fresh provisions in the shape of pigs and potatoes, the ancestors of both of which the Maories had received from Captain Cook.

Moreover, it became rapidly known that New Zealand could furnish splendid spars for the ships; and thus not only did vessels call in, but on shore

there came to be established little settlements of white men; at first only with the object of procuring spars ready for ships, but soon to advance to the collection of any produce the Maories would part with. These first attempts at commerce brought over missionaries; and then the splendid accounts of the island attracted thither the attention of those at home interested in the subject of colonization.

Various companies in England were started, and they planted colonies in the first instance at Wellington, Auckland, and Nelson. A high class Church of England colony soon occupied Canterbury, while the Scotch settled Otago and Southland, gaining there a climate much resembling their own.

Not long after, gold was discovered, and in great quantities, in Otago in the south, up the Thames river in the north, and on the west coast of Canterbury. Already has been exported, from New Zealand, gold to the value of some ten millions sterling, representing something like seventy tons of this valuable metal.

New Zealand holds a commanding position with regard to trade, and her numerous natural harbours

point to the prospect of her becoming some day of huge commercial importance. She stands between the vast districts of Australia and the great continent of America. She has abundant territory to support a population, fully adequate to maintaining an important position in the Southern world.

Australia is at present connected with England by the overland route, which occupies some fifty days, and also by that *viâ* San Francisco, which has now been established, and is supposed to occupy a few days less. The P. and O., with the aid of the Suez Canal, will avoid the great difficulty of transhipment, which must ever continue an insurmountable obstacle in the way of the Californian route.

Of late a plan has been mooted of connecting New Zealand with England *viâ* the Straits of Magellan. Already a splendid mail service runs its fine steamers from Liverpool to Valparaiso, through these same Straits. Twenty-five days is the time occupied between the Straits and England, and it is proposed to run steamers from some port in New Zealand to join the mail steamers at a depôt in the Straits. Thus one transhipment only would be necessary, while the route home would

probably occupy a shorter time than by either of the other lines.

The overland gives one a glimpse of India, Egypt, and parts of Europe; *viâ* San Francisco something is seen of the States; the "Magellan" route would give one an insight into Australia's great rival in the matter of wool and of meat—South America.

In both New Zealand and Tasmania one meets with "tokens," struck by the various shopkeepers, and still forming the chief copper currency.

In the Middle Island there are, comparatively speaking, no Maories or other aboriginals. But in the Northern Island they are somewhat numerous and troublesome. They are a very shrewd race, and have been so curiously managed by the English, that the present state of things is by no means to be wondered at.

Plans and devices for the settlement of their claims and evil doings have succeeded each other with such wonderful rapidity, that it appears as if each had only left its defects marked. Plans never appear to be fully carried out; a slight reverse at first, and the plan is abandoned, and its originator packed off.

No doubt but that in, say, forty years' time, the whole question will be settled by the total disappearance of the race of Maories.

A certain number of the natives always are in a manner our allies; and as half-castes arise, and European eating and *drinking* do their work, so will Te Kootis, and all others of the species, become of rarer occurrence, until finally they fall to rise no more.

Tradition says that the Maories only arrived 400 years ago, in number 1,000, drifted thither in twelve canoes, and that with them came the dog and the rat.

Cook reckoned the country to contain 150,000 natives; but by 1840 their numbers were supposed to be under 80,000, and now they are rapidly dwindling below 40,000.

In prospering nations the proportion of women to men is at least equal; the larger the majority of women, the greater the prosperity of the race. Among the Maories it has been reckoned there are 70 women to 100 men.

Concerning the climate of New Zealand it may be noticed:—

The mean annual temperature is a few degrees above that of England.

The rainfall is a few inches more, but the number of dry days in the year exceeds by nearly one-third that of the old country.

Report has given New Zealand a very bad climate, and report, in this instance, is wrong.

The snow which kills off the sheep only occurs up in the mountains, and is there only to be dreaded if it come on suddenly and earlier than usual, before the sheep have been taken down from their summer pastures to the lower ground, where they feed for the winter untroubled by snow. The boisterous and windy character popularly attributed to New Zealand is perhaps traceable to the prevalence of strong breezes in Wellington, and in the more southern portions of the Middle Island. In the capital itself, probably owing to local peculiarities affecting the air, wind is so perpetual, that Wellingtonians are said to be easily recognizable, in other places, by the habit they have contracted of invariably putting their hand to their hat, on approaching the corner of a street, even though a dead calm reign.

The scrubs, or forests of New Zealand, are of a green so dark, that a little way off they appear almost black. On the Southern Alps they chiefly

occupy valleys and gullies, and, in Canterbury, clothe curiously only that side of a gully sheltered from the "nor'-westers," which in this part of the island blow down off the Southern Alps. These winds, however, must come from other lands, as they arrive there hot, melt the snow, flood the rivers, and are still warm when they reach the plains, between these mountains and the east coast.

DIVISION II.

WAYS AND MEANS OF GETTING ABOUT.

CHAPTER X.

RAIL AND ROADS.

RAILWAYS. — TIMBER TREES. — TELEGRAPH POSTS. — LOCKS. — STEAMERS.—BRIDLE TRACKS.—ORIGIN OF ROADS.

ON landing in a strange country, in which one is about to travel, the energies are first concentrated on the obtainment of all facts connected with the ways and means of getting about; and Australia boasts of peculiarities in this direction.

Railways are rapidly extending about and around, and usually carry one the first portion of a journey from any of the capitals. At present, the lines are in great part single, though space has been cleared and enclosed for a future double line of rails. The vast resources of the country can never be fully developed till some uniform, and comparatively cheap, method of carriage come into working. Bullock teams on rough roads are a very poor substitute for the railways of the old country, more especially in a land where frequent droughts destroy

all fodder, and floods, as frequent, render roads often impassable. Some would advocate the immediate laying down of cheap tramways; others, however, maintain that the right and true plan is to commence from the first with substantial lines, with bridges, cuttings, and embankments, and let these gradually be pushed on as districts become more peopled.

Lately the columns of *The Field* have shown that there is arising in England a desire to make the most of the ground, at present lying waste, along our own railway embankments: some have wisely advocated the planting of fruit-trees; others have actually proposed these waste lands as good ground for the growth of timber. A very short acquaintance with the railways in Australia, would soon show the danger of having trees of any size near railway lines. Big branches, to say nothing of fallen trees, have proved awkward, and on occasions insurmountable, obstacles for trains on dark nights.

Telegraph wires already stretch away to the confines of settlement, and will shortly be connected by cable even with England.

Meanwhile, in the country itself, they are an immense boon to the scattered residents in the

bush. The remotest townships have their telegraph stations, though their letters, for want of vehicular communication, have probably to jolt a hundred miles in a pack-saddle.

One frequently meets along the tracks a couple of men, a swell and his sub, riding along inspecting the condition of the telegraph posts. They follow the long lines of wires, tomahawk in hand, wherewith to tap and sound each post.

Very little has been as yet done towards rendering the rivers of Australia more easily navigable: steamers are however to be found wherever Nature has left for them a clear course. The two great drawbacks to river navigation are "snags" and uncertainty in the supply of water. Snags abound in all rivers, and are portions of trees brought down by floods, and more or less firmly imbedded in the bottoms of the rivers. Their removal on a large scale has already been undertaken. The regulation of the supply of water could only be achieved by an extensive system of locks on the chief rivers, which would not only thus place water-carriage at the command of the interior, but would also materially assist any general system of irrigation which it might be found advisable to adopt.

Perhaps one of the best indications of the substantial prosperity of the Australias, is to be found in the existence of numerous steam-shipping companies, which run, in many instances, very fine and well-kept steamers from all ports and places. The fares are possibly rather high, when compared with those of Europe, but that is hardly anomalous in a new country. Carriage by sea is largely adopted, and the colonies are thereby developing that particular industry which has already proved of such great use to the mother country.

When the traveller leaves his comfortable saloon carriage, at the furthermost point to which the railway carries him, he faces an entirely novel state of things.

The roads in themselves are peculiar. The line of a road is usually formed, in the first instance, by some pioneer owner of flocks and herds, which he conducts to a certain tract of new country. There he settles down for a time; and riding about the district he invariably finds that, over rough or stony country, his cattle will have formed and worn for him a convenient bridle track.

Then, as people push on beyond that part of the country, they make use of these bridle tracks,

which then become more defined, though yet they turn and twist to avoid rocks and trees.

As time wears on, possibly a "dray" makes its way along, and then the track takes unto itself more of the signs of a road; saplings even may be cut away, and stray boulders rolled aside, until at last the soil is trodden and rolled so hard that grass no longer grows on it, and from the distance it presents an unmistakable white line winding along. This is the general condition of the tracks beyond where mail-coaches go. Whenever travellers become more frequent, a "road district" is formed, rates levied, and a road made.

The operation is simple—a space of a certain breadth is cleared of trees, stumps, roots, &c., and only when a range of hills or a swamp has to be crossed is there any real road-making work. Each successive dray or buggy takes its own independent way along this cleared space; the rain comes down; watercourses, holes, wheel-ruts, and other unevennesses are formed, to avoid which, all along, detours, more or less extended, are made through the bush on either side.

This state of things lasts even after a coach has been placed on the road; but by and by, first

over swamps, then over bad places, and finally right along, is "blue-metal" laid down. And this for long periods lies unused, till very heavy wet forces drays over it; and after a while, as fences appear each side of the road, it finally gets licked into shape and forms a really good road.

CHAPTER XI.

BUSHRANGERS.

TUTELARY BUSHRANGERS.—"THUNDERBOLT'S" DODGE.—HOTEL "STUCK UP."—TRACKERS.—MAILS STOPPED.—HARBOURING BUSHRANGERS.—AIDING THEM.

TRAVELLING in Australia has occasionally partaken of some excitement, owing to the presence of that class of men known as bushrangers.

According to what one hears, there would only exist three or four in all Australia; for in the event of anyone being "stuck up," the, as it were, tutelary bushranger of the district is always "attached" with the deed. In the northern district of New South Wales it was always "Thunderbolt again;" on the borders of Victoria "Power has again shown forth:" sensational headings such as these appear in the papers immediately anyone has been robbed; though when the thief is caught, it is found that, though he sought during the commission of the robbery, to inspire terror by proclaiming

himself to be one of the well-known knights of the road, he is in reality nothing more than some new hand at the work. A few of the bushrangers have curious histories, but they all do very curious things.

Some are simply villanous cowards, who shoot men from behind trees as men would pot rabbits; others, however, often show considerable sharpness and cunning. For some time it was maintained that "Thunderbolt" had never fired at anybody, and owing to this caution on his part he was not outlawed, and thus could not legally be shot down when seen. His peculiar dodge was to be accompanied by some novice in the work, to whom he entrusted all the assault and battery with intent-to-kill part of the business; he himself being however "all there" to relieve the station, mail, or traveller of anything to which he might take a fancy.

One of the little inns along the road would be "stuck up" as follows. Towards sundown the old Irish landlord would be yarning in the verandah with some squatter, staying there for the night; his wife in the meantime, within, handing "drinks" to two diggers. Presently up the road come two men riding, apparently travellers. They pull up;

"good evenings" proceed from every mouth; the two men take their saddles into the verandah, and the odd boy takes the two horses round to give them a feed of hay. Supper is put on the table; and down sit landlord, landlady, swell, travellers, and diggers. Presently, after meat, bread, and dough have been demolished, one of the two latest arrivals, to the astonishment of all, lays on the table a revolver; which example is immediately followed by the other, who, after a look round, turns to the dismayed landlord with "I'll trouble you to step in and fetch your cash-box." This being relieved of its coin, the whole party are forced, under threat of being "bulleted," to allow a search of their pockets. The swell at once loses his bundle of "notes," but the silver in his purse is returned. The diggers, on their way back from a spree, own but a few shillings between them, and these they do not lose.

Then everybody is ordered out into the yard; one of the bushrangers with his revolver stands sentinel, while the other, with the help of the boy, proceeds to place on the two best horses the best saddles and bridles to be found, utterly regardless of ownership.

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Then, very probably, the whole party are again taken into the bar, and "shouted" for by the bushrangers, who honestly pay the expense, the publican thus receiving back a small portion of his own cash. After this the two rangers ride off, having first made their victims promise not to mention their visit for a certain number of hours. As soon as practicable, however, somebody gallops off to the nearest police-station, and troopers at once start in pursuit, though they rarely succeed in catching the bushrangers.

The police are often accompanied by some sharp-sighted aboriginal, who is of great use in "tracking," and will often trace men, horses, or beasts for miles. One of his dodges seems to be to watch for any soft or readily impressionable ground; there he sees the tracks making in a certain direction: he follows in this direction till he comes to another soft patch, and takes from thence a fresh departure. In this way he can follow it up even at a canter. Stolen cattle have been tracked as far as 300 miles, and the thieves then caught and convicted.

Sometimes, as the mail-coach is spinning along, two or three men on good horses will suddenly appear; one will cover with his revolver the driver,

another will stop the horses, and a third will look after the "insides."

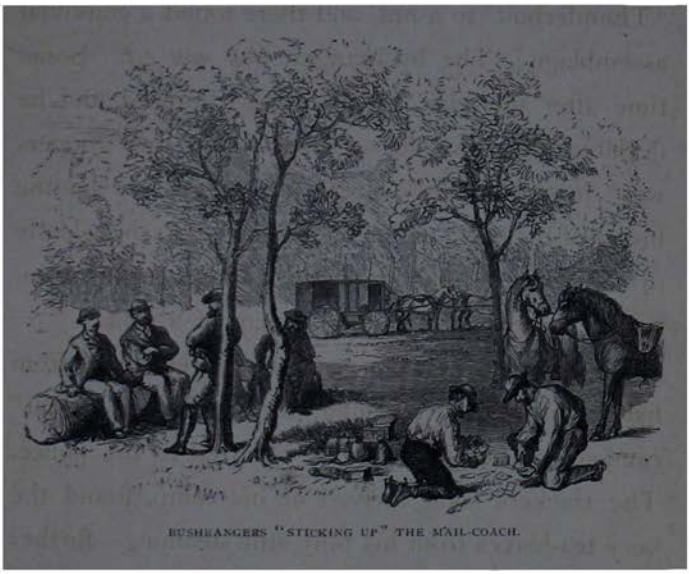
On one occasion a shepherd, in rather an out-of-the-way part of the road, wished to give a letter to the driver as he passed in the dark. All in the coach of course supposed him a bushranger. When he sung out to the driver to stop, visions of "Thunderbolt" arose; the driver, in the most plucky manner, staggered the man by a blow from the whip, and urged his horses at full speed to the nearest police-station. The troopers immediately gave chase, and found a poor innocent shepherd, with a letter in his hand, still standing in the road, utterly dazed.

However, when stopped by veritable bushrangers, the driver is forced to take the coach some hundred yards, or so, off the road. Then he and the passengers are placed under the guard of one of the robbers, while the other two ransack the mail-bags, in which they occasionally find even several hundred pounds. Finally, they overhaul the passengers' pockets, all three during the entire operation keeping vigilantly on their guard.

Occasionally at this stage of the proceedings the bushrangers have politely escorted the coach and its

passengers to a neighbouring public, which they proceed to "stick up," and where they treat all hands to a first-rate lunch, for which they pay, and then depart.

Resistance is seldom offered, most men preferring to lose any money they may have with them, to



BUSHRANGERS "STICKING UP" THE MAIL-COACH.

being put out of the way of enjoying what they may have elsewhere.

A trooper is often sent with the mail as guard, armed with revolver and carbine. This system works well as a deterrent, and, in case of attack, such a constable has proved enough to scare away

the foe, who had commenced the onset unconscious of the trooper's presence. It is a very difficult job to capture some bushrangers, for they are greatly harboured by shepherds, stockmen, &c. Often they will give entertainments of drink and dance in some shepherd's hut. It is related that troopers tracked "Thunderbolt" to a hut, and there found a convivial assemblage. The bushranger was *non est.* Some time after this visit his mate was captured, and he declared that on that occasion, when the troopers were in the hut, the great bushranger lay on the broad of his back, under one of the bunks, hopelessly drunk. But he had perfect confidence in the company's concealing him in the event of a visit.

On another occasion two men, returning from fishing in the early morning, came on "Thunderbolt" camped. They immediately reported to the police. The trackers soon arrived at his camp, found the very tea-leaves from his billy still steaming—further than that they could trace nothing; an old shepherd having driven his flock backwards and forwards round the camp, till all the tracks were completely obliterated, and the direction taken by the delinquent utterly unknown; for, of course, when interrogated, the shepherd had seen nothing.

As the country becomes more settled, so will it become more and more unfavourable to the existence of bushrangers; though it is by no means probable that they will be wholly exterminated while any large tracts of land remain at all sparsely inhabited.

CHAPTER XII.

COACHES AND HACKS.

COACH.—MAIL-STATION.—NIGHT DANGERS.—BREAKS BREAKING.—JOURNEY OF A LETTER.—BUGGIES.—NO POST-HORSES.—BICYCLES.—HACKS.—SORE BACKS.

IMMEDIATELY beyond those happy districts whither railways have already penetrated, locomotion has to be achieved by means of the coach.

MAIL-COACH.

In Tasmania alone is found the regular "stager" of the olden style; elsewhere the coach species is

represented by that variety locally known as "American."

Resting on a framework, supported by four strong wheels, lies an oblong tray; in front of this is a something strangely resembling an enlarged edition of the whole machinery of the box of a London four-wheeler. Behind this are two or three seats, ranged across the tray; then posts rise, from the four corners and from the sides, to the support of a roof, from which hang leathern curtains, which can be looped up or buttoned down at pleasure. Beyond the tray, and behind, all is stowage room for the heavier mail-bags. The sole step in is the break to the after-wheel.

The whole concern is drawn by four horses, which are changed about every fifteen miles at the "mail-stations." These are each taken charge of by a man, whose work consists in getting four horses ready harnessed by the time the mail comes up. The tired steeds are taken out; then fresh ones put in, and the coach proceeds. The "mailman" unharnesses the wearied arrivals, hobbles and "bells" them, and so turns them into the neighbouring bush. Each driver keeps with a certain set of horses, and has one fixed portion of the journey to perform, both

going and coming: *e.g.* if he be allotted eighty miles, or so, of road, he may change horses every fifteen miles; yet from keeping to this same eighty miles, backwards and forwards, he becomes so thoroughly acquainted with that portion of the road, that he is enabled to keep up the pace on the darkest of nights; at the same time avoiding as

MAIL-STATION.

much as possible the many bad places in the track, by detours into the bush, among logs, stumps, branches, and tree-stems; which detours he follows in all their sudden windings with as much confidence in pitchy darkness as in broad daylight.

Nevertheless, coaching is anything but a comfortable way of going to and fro; and there are vague rumours afloat of persons having had their spines injured and their skulls more or less smashed in, by the projecting nuts and bolts which protrude on all sides, in the posts, roof, and seats.

A mail driver has to reach certain places by certain times: some of them, to gain this end, drive at a steady pace; others, however, prefer going ahead at a rattling speed, and so having time to spare for breakdowns and for rests at the various stopping places; and when this latter method is adopted, the jolting is tremendous.

We have already seen how bad the roads are in many parts, and *leather* springs have but little effect; consequently the passengers are sent flying in every direction: in some instances the seats are not even cushioned. Moreover, all around are the bolts above mentioned, together with bars of wood and sundry other projections, which readily prove themselves superior, in point of hardness, to the human body.

A night in the mail is an event to be painfully remembered for a week afterwards, indignantly remembered for three weeks afterwards, and an achievement

to be boasted of to the natural term of one's existence. It is, however, fair to state that an assertion has been made, scarcely indeed to be credited by any who have passed a night in such a vehicle, that a certain person did actually *go to sleep*, he being the sole occupant of the inside; and this he affirms he did, by resting his lower half on sundry bags of letters in the bottom of the tray, and then pillowing his head on the front seat. And who is there who boasts of the smallest atom of philosophy in his soul, who would not at all events put to the test this plan, on finding himself irretrievably in for such a night's lodging?

This sort of travelling is pretty safe; indeed, accidents but seldom occur: flooded creeks on rare occasions have washed off coaches and horses, though the loss of human life is not usually great. The breaks have a peculiar knack of carrying away just at the top of long and steep hills; but the drivers, by flogging their horses to the utmost of their speed, generally manage to reach the bottom in safety.

The great drawback to mail travelling is, that one is not always sure of a seat. Unlike Switzerland, where to take one's place by "diligence" ensures

transit, extra vehicles being always put on for extra passengers, here the coaches can only hold a certain number; and as but one vehicle runs, it is often anything but agreeable, or advantageous, to have to get up three or four nights following, about two o'clock in the morning, each time to find the coach crowded. One must expect this, however; the chief object of the coaches being to carry H:M.'s mails, passengers become quite a secondary consideration.

Mails, in newly taken up districts, are carried by a man on horseback; as these parts become more populated, the increased bulk of the mails necessitates the use of a pack-horse as well; and, finally, the bags become of such weight as to justify the laying-on of a mail-coach.

A letter from up country in New South Wales travels thus. The post goes, say, twice a week; it is carried by a boy, who canters from place to place with the mail-bags strapped to his saddle. As the letters gather by the way, he has need of a pack-horse, which he leads some thirty miles to where he delivers the mail to the keeping of the driver of the coach. It then travels down the road till within about 100 miles of the coast, where it is

transhipped into a railway train; and from this it takes passage on board a steamer, and after a voyage of five or six hours reaches Sydney, there to join the P. and O. boat.

Travelling by mail, were the coaches and roads a little better, would be a very good way of getting about, inasmuch as it is a quick and likewise an independent way; no horses to be looked after and fed, by the traveller himself; no breakdowns in wild boggy places in a heavy downpour, with no means of getting out of the mess; for when the breakdown happens to a coach, the driver rides off of his own accord on the remaining horse, to a station where he is sure of a reserve coach, and the traveller meanwhile need only sit inside the wreck, out of the rain.

However, mail-coaches do not run everywhere; and those who are obliged to travel, say, 100 miles to meet it, more particularly when there are ladies in the case, prefer to make the entire journey in their own carriage. For this purpose is used, almost universally, the buggy; not the two-wheeled, hooded machine of India and England, but that light arrangement of seats on four large light wheels, which is usually supposed to have had its

origin in America. This vehicle occurs of various sizes and shapes. There is the "tray buggy," a seat set on a wooden tray, which carries only two persons, but likewise a goodly amount of baggage. From the lightest buggy of this description, we meet them in all grades up to the big heavy family machine, with large roomy seats, the whole well covered in by a hood.

Yet all buggies have certain points in common, which render them the best-known kind of carriage for bush travelling. Of peculiarly light build, upon good springs, with wheels of huge diameter, the easy manner in which they will travel over rough ground is perfectly astounding; and as all ground up in the bush is more or less rough, this feature cannot be over-estimated.

The only apparent drawback is a difficulty in getting in or out, owing to the great diameter of the wheels, which thereby nearly touch each other. This difficulty is overcome, however, by pulling up in a peculiar manner—the horses being turned sharply away from the side on which it is desired to get down.

No great pace can be achieved by this method of travel, owing to the total absence of all arrange-

ments for supplying changes of horses, the traveller having to depend upon his own. But then a buggy is marvellously lighter on the collar than any other vehicle. Each day some suitable place has to be reached whereat to stop the night, and thus may be presented the awkward alternative of doing either twelve or seventy miles in a day.

As a sort of connecting link between what has just been said and what is to follow, bicycles may be mentioned as possessing speed, minus the power of eating their heads off; but bicycle riders must find out for themselves whether the country be too rough or not.

Travelling with a couple of saddle-horses to each man is in very general adoption. It is a good plan to ride the steeds alternate days, if it can be so arranged, having the pack on that which is led. Besides the advantage of thus keeping them fresh, camping out can hardly be resorted to with only one horse, as, being a gregarious animal, if by himself he is almost sure to wander far during the night in search of a mate.

On horseback the bad state of the roads is unnoticed; moreover many short cuts can be taken. The baggage for such journeys is usually carried in

a valise; that is to say, an oblong piece of leather with a lining of some strong material. The leather and the lining between them form a bag, in which can be stowed away clothes, &c.; and the whole, when rolled up, is strapped across the front of the saddle. Saddle-bags and pouches are likewise generally taken.

It is curious how horses become accustomed to frequent drinks, or not, according to the country they live in. Thus up in New England, where water is always plentiful, they have acquired the habit of incessantly taking small drinks; whereas in drier districts, even when there is a sudden flood, they take their one or two accustomed big drinks daily, and no more.

One of the greatest disagreeables in this way of travelling, is the danger of giving a horse a sore back, by which he becomes practically useless. Most people have their own theories concerning the cause of it; but it seems usually to arise from the hair being left more or less matted with perspiration; the hardened lumps thus formed, when pressed on and rubbed in, by the working of the saddle, naturally become the insidious originants of a grievous ulcer.

Immediately after removing the saddle, brush the hair in every direction, leaving it thus open to the air for the night; and then, just before re-saddling, carefully brush it perfectly smooth; and by such simple treatment, all risk of a sore back is obviated.

CHAPTER XIII.

WAYFARERS.

DRAYS. — BOGGY PLACES. — BUSHMEN. — WELL-SINKING. — SWAGS. — TRAVELLING STOCK. — SHEEP INSPECTORS. — BOXING. — HOW PEOPLE LIVE ON OTHER PEOPLE'S GRASS. — REMEDY. — DISEASES.

A VERY striking feature in making one's way up country for the first time is the multitude of drays one meets; but it must be remembered that all the produce of the up-country districts has to come down by this means, and that the return drays are equally needed to carry up the stores required by the producers.

There are four-wheel drays and two-wheel drays, and they are for the most part drawn by teams of oxen, ten or twelve beasts forming the team. A dray will carry about three tons. Some there are of lighter construction, having teams of twelve horses, and these are supposed to travel fast.

Carriery is a regular trade. Many a man who has made some hundred pounds or so, becomes a carrier, investing his capital in a team and dray.

Then he will travel at about the rate of ten miles a day, taking down to the seaports wool, and taking up to the interior a miscellaneous cargo of bonnets, flour, sugar, gunpowder, woolpacks, saddlery, tea, shears; in short, everything wanted for the year by squatters and their families, by storekeepers, and all others dwelling in the small townships.

In wet weather these drays have hard times of it; sometimes having to unload at one side of a boggy place, and cart their cargo over piecemeal, as did they attempt too heavy a load at once, the dray would be imbedded. Occasionally they are delayed for days by floods and other effects of too much water, and at other times, during the prevalence of drought, equally detained through the total absence of fodder and water along the road.

Drays generally travel two or three together, for mutual aid; and at night a large tarpaulin is spread over each, and under this the men—for the carrier has one or more assistant men or boys with him—camp in comfort.

Carriers often have their own little piece of purchased land, where they keep up a more or less comfortable home: thither, when business is slack, they retire. If at the right time of year, they will

put in seed to grow crops of hay or grain. Their teams meanwhile take a spell in the bush.

Some new-comers' preconceived ideas of Australia are strangely upset by the numbers of people to be met with on the up-country roads. Ride along one, anywhere you choose. Now a well-to-do squatter will pass with one or more buggies; then a regular train of ten or twelve drays travelling together, each dray accompanied by one or more saddle-horses, which usually follow of their own accord, here and there taking a bite as they go along. Presently a carrier will be seen mounted, and cracking his huge whip from the saddle; again, following the dray, on the top of a horse will come the partner of the carrier's joys and woes. "Swells" and others constantly pass on horseback. Every now and then one meets, on foot, bushmen, diggers, Chinamen, &c.

These bushmen, not of the South African kind, but real honest Englishmen, the majority of whom can and do tell interesting histories of their lives, are in a chronic state of search for work, and go about from place to place, getting a feed gratis each night; "hiring" now and then; but stopping only a few days, and then leaving on some pretext or other.

Thus it once came to pass that an energetic squatter sank a magnificent well deep down through granite rock, and thence drew a never-failing supply of delicious and icy-cold water. All the country round heard of it, tasted it, and envied its possessor. A neighbour (within ten miles) determined to sink a similar well. Two bushmen appeared one day begging for work. By cautious questioning he discovered they had been at the "Fields," and were, therefore, adepts at "sinking." They were engaged to commence operations at once. The first day brought them to the rock. They said they should be obliged to give it up for want of proper blasting tools. The squatter nullified this excuse for departure, by producing the very tools which had accomplished his neighbour's magnificent well, through hard granite, and now the obstructing rock was of far softer kind. Another day's work was got through, though the two men grumbled much. On the third day they hit upon a grand idea. "The tools were useless, badly made of bad material, and the sinking a well by their aid was hopeless." The squatter's "clincher," that a deep well had already been sunk by their means, only called down the disbelief and quiet derision of the diggers. The

squatter had been "let in—he'd only got to ask any one as knew anything about sinking—they hadn't been to the diggin's for nothing," &c. So they refused work and departed on their way, having thus cleverly rested for a few days.

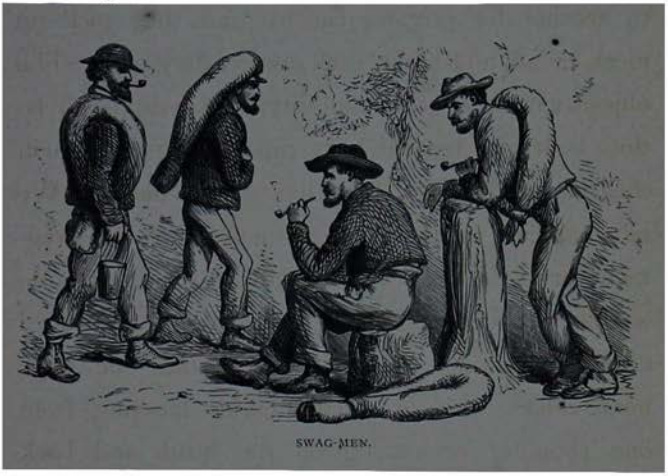
Some men, under this plea of "wanting a job," are merely travelling from one part of the country to another for private reasons, and they pick up meat, bread, and tea at each station they pass. The object with the great majority, however, is to be thus kept and fed till busy times bring with them shearing and other lucrative employments. We have already remarked that these bush- or swag-men carry "swags," *i.e.* a blanket made up into a roll six feet in length; the two ends lashed together making the whole resemble one huge horse-collar: this is carried either hanging from one shoulder or resting on the head and back like a coalheaver's pad.

And thus the people go to and fro over country that, not so very long ago, was supposed by some to consist of arid deserts, and by others to be one expanse of inland swamps and seas.

Often, whilst journeying, one meets or passes "travelling stock"—herds of more or less wild

"beasts," and flocks of sheep, each marked with a tar T, to show that they are "travelling," *i.e.* moving from one place to another.

The law enacts that stock may be taken along public thoroughfares, but must travel a certain number of miles in the day. It should be remembered that beyond the more settled districts land is not



SWAG-MEN.

defended from the trespass of animals passing along, by hedges or fences; all is open; and so the law creates an imaginary boundary, leaving a width extending to two chains on either side the road, which is allowed to be fed on, by travelling stock.

To see that this important rule is observed, and for the prevention of the dissemination of contagious

diseases, each district has its "sheep inspector." These inspectors pass on word from one to another of any sheep travelling; and those in charge of the flocks are obliged to give notice of their approach, to the managers of the various runs they pass through, in order that station shepherds, who feed along the road, may be forewarned, and thus save their own flocks getting "boxed" with the travelling "lots." Sheep are very partial to making a "rush" towards any strange flock they may see, and should they succeed in reaching it, great confusion and trouble is the result.

A travelling flock is usually tended by two or more men, with several horses. They camp near the flock at night, and then in the morning one of them starts the flock, leaving his mates to "roll up" and follow.

Occasionally, in order to see that none are missing, the flock is counted; and this is accomplished by forming a long fence of branches, &c., taking in any fallen trees which may lie advantageously. The flock is then driven up to this, with the aid of dogs, and counted, as it passes through an aperture in the middle.

As may be imagined, sheep travelling across a run, eating up grass and drinking up water, are,

more especially in a bad season, a great nuisance, and the less that come the better for the squatter.

There are two classes of "travellers:" the first, which must, and ought always, to exist; and the second, which ought to be put an end to, at once. The first class is an absolute necessity. Two of the main products of a station are fat, and store stock; and flocks of these have to transport themselves either to the butcher or to some station newly taken up. Every squatter makes use of this means of increasing his income, and therefore should never object to others doing the same.

With the second class it is far different. To this belong those flocks which "travel" in time of drought, in search of food and water.

A great many parts of Australia are subject to very violent extremes of seasons, whether good or bad; whereas other parts are much more equable. In the former, the stations are sometimes stocked as if for extraordinarily good seasons, and then when the bad ones come, and food gets scarce, a large proportion of the sheep are sent to "travel" over the more equably favoured districts; which proceeding of course is anything but fair to squatters in such localities, who have often preserved their

grass and water by stocking with prudence and by expensive damming.

A man with an overstocked run has more sheep, and therefore more wool, than if it were consistently stocked; if he can manage to keep his sheep alive by occasionally feeding the surplus on other people's runs, so much the more wool for him. True that, for his stock travelling, the law would only allow him a breadth of two chains on either side the road; but sheep, if cleverly left to themselves for a time, will find there is grass the other side of the law.

Most people would agree that such a state of things should be put a stop to. The remedy is simple. All travelling flocks should be obliged to give, to each inspector, not only a certain destination, but a sufficient reason for proceeding thither. The destination by itself would be useless, as, when there, they have but to proceed somewhere else. But if those in charge are bound to give reliable information that the sheep are going to a certain place for a certain purpose, *e.g.* to be killed, sold, or to stock some station, they would prove themselves to belong to the first class above mentioned, and may then fairly be allowed.

Travelling stock has further to be watched closely, lest it should bring with it scab, catarrh, "pleuro," or other baneful disease, of which the contagion is so subtle that even the road having been passed over, by an affected flock, is sufficient to contaminate the neighbourhood.

The opinion is rapidly spreading that many diseases are caused by the working of minute living organisms, which, through various causes, become detached from their victim, and are thus at freedom to carry the disease to another. Hence an origin of contagion.

CHAPTER XIV.

FOOD AND REST.

STATIONS FOR THE NIGHT.—TOWNSHIPS.—STORES.—GOVERNMENT BUILDINGS.—CHURCHES.—CLERGYMEN.—EXTEMPORE SERMONS.—DOCTORS.—PIANOFORTE TUNERS.—INNS.—PRICES.—FEEDS.—CAMPING OUT.—JOHNNY CAKES.—GUNYAH.—WAKING UP.

THUS much, for a cursory glance, at the means of progression in travelling; and now for the means of keeping up one's powers of progression, namely, food and rest. In the primitive times, and it is still the case some way up country, stations were the usual places "made" every night, and "swells" were always welcome; they being either personal friends of those on the station, or possessing some mutual friend. Others, below the rank of "swells," usually adjourned to the stockman's hut. As, however, the interior of the country becomes taken up, and travellers unknown in the district become more numerous, it is found to be uncommonly inconvenient, to say nothing of the expense,

to take in several people every night, many of them utter strangers to everybody in the neighbourhood. And so the squatter encourages the erection of an "accommodation house," usually by some old servant, and in immediate proximity to the head station. This soon becomes an "hotel;" and thus is formed the nucleus of a township.

Townships now abound of all sizes—the most usual mode of classification is by the number of public-houses in each. The bush road suddenly becomes broad, straight, and clear, fences run on either side, and tree stumps multiply. Presently, on either hand appear buildings more or less numerous, according to the size and importance of the place. Rails, and even palings, surround allotments of land, which intervene between scattered dwellings of men; then the planning of the whole is visible in the "reserves" for streets, which cut the road at right angles.

The public-houses stand conspicuous by their length, and by the lamp in front, which they are bound to keep alight during the dark hours, the only means adopted of illuminating the smaller townships.

The "stores" are hardly to be mistaken—a stack

of bricks side by side with a pile of planks; next, lying up against the fence, rusty tire and bar iron; empty cases in abundance; and then the verandah is reached, into which, apparently from the door, has burst a flood of saddles, bedsteads, oil-cloth, &c. In the window, or windows, will be seen a choice assortment of smaller articles—china, pipes, glass, dolls, silver-plate, toys, jewellery; and then inside is to be found anything that man can want. Books there are of all sorts and descriptions. Turning round in the store one catches glimpses of clothing, saddlery, furniture, food; in fact, everything that could be possibly desired, including Rimmel's best perfumes, snuff, and gunpowder. The chief storekeeper is one of the great men of the place. He will usually be postmaster, and, even in a small way, banker, for he will cash cheques drawn by squatters and others whom he knows. As the township increases in size, so does the storekeeper in prosperity, oftentimes in person; and by the time the township boasts of five or six publics, he will be a really wealthy man, and his store will now probably become a magnificent brick building of two stories, with roof of corrugated iron.

Wood being usually so plentiful, the houses are,

in the main, constructed of it; either of the old original "slabs," or of the more modern "weather-board." The roofs are of iron, shingle (*i.e.* wooden tiles), or bark, according to the taste and convenience of the person for whom the house is built. The two Government buildings in each township are a school-house and a police or "court-house," where are to be found two or more troopers cleanly dressed in blue coat, white breeches, and top boots. Their popular title is "traps;" their duties to watch everybody, and to stand by to serve summonses.

In most townships is to be found a church, usually Church of England, and larger or smaller, stone or wooden, according to the size of the place. Be the township large, besides this church a chapel of some other denomination is usually present. The clergyman takes up his residence in some part of the township, and then travels about his district, holding services every day at head stations, and visiting the different townships on Sundays. His district embraces many miles of country, and a very great proportion of his time is occupied in travelling over it, so that he has little time in his own home. In the larger towns his life more approaches that of his *confrères* in England, while in the cities it is exactly

the same. The up-country clergyman lives a peculiar life, visiting his parishioners, but often having to journey twelve or fifteen miles between two of them. On leaving a station he usually puts, in some conspicuous place, a written notice of his next visit.

Shepherds and others who live away in the bush are usually very anxious to have their babies christened, and they eagerly bring them in to the head station on the appointed day for service.

It may be remarked as curious, that from all accounts it would appear, that an overwhelming majority of these bush clergy prefer preaching extempore sermons, which occasionally reach an extreme length, and being somewhat of a rambling species, are scarcely calculated to gain the appreciation of hard-working and essentially matter-of-fact congregations. One clergyman, who was rather notorious in his own district for his sermons, was popularly supposed to have a stock of only three commencements, and of these two were rarely heard. He almost invariably began his sermons with the statement that man was finite, his Creator infinite; and from this he started off on an interminable variety of subjects, of which he could not possibly dispose within any reasonable time. There are not wanting,

however, clergymen in the bush clever enough to preach pithy sermons; they make them interesting, but they make them short; they prefer keeping to some one single familiar point, and not rambling over all the wide realms of divinity. Their congregations are thus able to take in all they say, and go away, to their month's work, with some one well-defined idea in their heads, instead of feelings of sleepy wonder at the half-incomprehensible stores of learning possessed by the parson.

Up country, also, doctors live a peculiar life. They usually have their comfortable home in some township, and they are ready with horse and buggy to fly off anywhere, often accomplishing great distances at great speed, but in return receiving large fees. The return home is accomplished more leisurely, as the doctor is always welcome at a station, more especially if, among his acceptable items of cultivation, he possess the power of playing dance music, and in addition is able, on a pinch, to set in tune one or two refractory notes in some cracked old piano.

Perhaps the most curious characters to be met with, up in the bush, are those remarkable individuals who appear on rare occasions frequently clad in old

black coats and tall hats. By their manner of behaviour and of talk, these gentlemen have evidently a curious history, the particulars of which they will seldom reveal. Their manners and their scraps of knowledge betoken their early training for some position far above that they now occupy. They are humble and content with the stockman's hut. The labours they are supposed to accomplish are the tuning of pianos and mending of clocks and even watches. They will repair broken china, and all sorts of jewellery; and, in short, will make themselves useful in any little labour requiring delicacy of touch, and fine tools or materials, a small supply of which they always carry with them. Their fee for tuning a piano is often from three to four guineas, and other charges in proportion. But they appear very rarely; and if good at their peculiar trade, which is by no means always the case, they can make themselves highly useful at a head station.

Nowadays inns are plentiful and very good, along all the main roads; and very good, if not plentiful, even along the less frequented roads. The regular bush inn preserves its characteristics all over the country. It is always a very long and low building,

of brick or weatherboard, with a verandah along its whole front; above this stands a more or less ornamental signboard.

Under the verandah, facing the front, there is a long series of doors—one leading to the bar, another to a billiard or bagatelle-room; then come one or two private rooms, and then bedrooms *ad libitum.*

Most, if not all, of these inns are very comfortable, and by no means high in their charges. Being hundreds of miles from the capital would appear to make no difference. Dinners cost, say, 2*s.* 6*d.* a head, and are very nicely put on the table. Or take for example a lunch:—beautiful white table-cloth, plates and knives clean and by no means old, magnificent plated cruet-stand, very good china, hot plates, besides small cold plates for bread and cheese; then there is curry and rice, fish twice laid, a cold round of tongue and beef, also an English cheese wrapped up in a napkin, bread, handsome butter-dish with fresh butter—and all this at 2*s.* a head, four hundred miles from Sydney.

For horses, 6*s.* a night is the usual charge, and in most cases they get honestly fed and treated. Only one instance ever came under the writer's

notice to the contrary. A man, lately hired, somewhat reluctantly gave the following reasons for having left his last place, as groom at an "hotel," as all inns are called up in the bush :—

"Well, you see, sir, I and old B—— couldn't agree: he wanted me to put good hay afore the horses at first, so that the masters might see their horses a-begin to feed; and then, as soon as ever they turned their backs, I was to shift the good hay for some musty stuff, as old B—— couldn't nohow get rid on; and then if the gents complained in the morning of the looks of the horses, I was to swear that after a bit the horses wouldn't touch the hay. I didn't seem to see doing it; so we had a row, and I got the sack." It is to be hoped that old B—— was the only exception to the general rule.

When it is desirable to be independent of accomplishing certain distances every day, camping out is resorted to. A supply of food is carried with one, and all that has to be found each night is water (also grass) for the horses. As far as cooking utensils are concerned, a tin quart pot, commonly known as a "billy," will be found invaluable; in it water is readily boiled, and it will

make tea or soup, and also boil small birds. About the simplest and most effective way of cooking meat is to toast it on a forked stick, having first made it as flat as possible, either by cutting it in slices, or, in the case of birds and fish, opening them out.

At stations, shepherds' huts, townships, &c., stores of all sorts can be procured, including damper, which is the bread of the bush. This preparation, however, is very liable to become in a short time sour and heavy; and hence the usual plan is to carry flour and make fresh bread when wanted, in the shape of "Johnny-cakes." A piece of bark peeled off a tree, about 1½ ft. by 1 ft., and dried before the fire, forms a capital board on which to mix up the dough. This is then flattened to about the size of a pancake, and double the thickness. The live ashes of the fire are next raked out, and the cake thrown on the top of them. After a short interval it is turned, and will quickly become sufficiently roasted. Eaten hot it is very good; when cold it becomes sour and heavy; after that, if warmed up, it is improved, though not restored to its pristine excellence.

As a tailor without his needle, so is a camper-out without his tomahawk. A small canvas tent

is very useful, but in its absence some sort of a "gunyah," or hut, should be run up to keep off the heavy dews. When about to camp, select some fallen tree, the bigger the better, near water and good grass. Unsaddle, bell, and hobble the horses, and let them go. Next light a fire of small sticks, grass, leaves, &c ; place it against the log to windward; lay on larger branches parallel to the back log, and set the billy down, full of water, to boil. If you possess a tent, now put it up: if not, cut one or two good saplings; make six forks, each about 4 ft. in length; cut also four poles 8 ft. to 10 ft. long. With the forks support one pole horizontally by its two ends along in front of the fire. Then lean the other three from it to the ground. If a spare blanket is at hand, lay it over this framework ; if not, throw on boughs and leaves, and pile them up all round and above; then press them down by laying thereon three or four logs; and so they will keep out all dew and wind. If rain threaten, for the roof, if possible, cut some sheets of bark off a stringy-bark gum-tree; and then, with a trench round the gunyah, the rain will not affect those within.

Sleep being the great refresher of man's energies, the place where we rest should be as comfortable

as possible. A hollow should be scooped in the ground just where the hip-bone is to lie. Leaves, grass, &c., dried at the fire, form a capital mattress. Over this it is as well to lay the saddle-cloth, previously well warmed. The inside of the saddle forms a capital pillow.

On a cold or wet night it is as well to collect a goodly array of logs wherewith to replenish the fire, and the colder the night the nearer should the gunyah be to the fire.

It is a good sign of successful camping-out if, on waking up for the first time and proceeding to pile up the fire, you find daylight is already appearing. Then, before you are well entered upon a finishing snooze, a "jackass" leads off with his peculiar row, followed on all hands by his relatives in the neighbouring trees. Then you listen; and if the horses' bells are near at hand, you feel lazy and happy; if you can't hear them, you feel anything but the one or the other, looking forward to some miles of trudging over the wet grass in search of them.

There are many little dodges highly essential to the rendering of camping-out agreeable; but they are only to be picked up by experience.

CHAPTER XV.

FLOODS.

NAMING PLACES.—NEWCASTLE COAL.—SANDY CREEKS.—RIVERS BANK AND BANK.—SWIMMING HORSES.—LOGS.—MEASURING RIVERS.—CROSSING STOCK.—CAMELS.—MULES.

IN Australia, as in all colonies, ancient or modern, there is found that special liking for repeating the names of places in the old country.

A great many townships owe their names to some pioneer squatter, who, in olden days, has named his first station after the village he had left in England.

Then people push on beyond him, and, for reasons before mentioned, he starts an "accommodation house;" this soon becomes a public. Then his "store" and meat place become so frequented, that he hands over the business to others. A blacksmith soon appears on the field; and thus inn, store, meat-shop, and forge start up, and we have

the rudiments of a township. As passers-by that way increase in numbers, these foundations attract competition, and so a genuine township springs into existence; and, mayhap, it soon becomes the metropolis of some important inland district.

This repetition of old country names, more especially in the case of ports, often gives rise to a certain amount of confusion: take for instance the great coal port of Newcastle, which exists with similar associations both in New South Wales and in England.

Besides these home names, as in all new countries, so in Australia, one finds certain appellations, arising from descriptions given by first explorers, applied over and over again. On the map, all over the country, occur "Sugar-loafs," whether as stations, townships, or what not, and derived from a hill of the generic shape somewhere in the neighbourhood. Then, again, "Kangaroo Flat" is of very frequent occurrence, though flats frequented by kangaroos abound in so many directions, that one would scarcely deem it a distinctive appellation. Another very favourite custom exists of naming any creek, no matter what its original name, "Sandy Creek;" and this arises from the fact that often for

years a creek will run, and be plentifully supplied with water, and have large and deep water-holes all along its course. Then, after a very wet season, after the creek has been flooded for some time; the waters subside, and leave the old bed all choked up with sand. The creek then gains the epithet of "Sandy" from some disgusted squatter, who wakes up one fine morning, and finds the deep water-hole, near which, in the belief of its never failing, he had built his home, nothing more than a waste of sand. He passes on the name to others, and so it comes that its old original, mayhap romantic name, is only to be discovered by reference to one of the older maps of the district.

One of the most disagreeable *rencontres* in travelling is, on arrival at some river or creek, to find it coming down "bank and bank." In Australia most rivers and creeks are mere rain-courses, not perpetually running. A heavy thunder-shower will often set them going for some time, and two or three days' rain has a great effect.

Sometimes the rain may be falling some way up the river, on one of its tributary creeks, and it may "come down" whilst fine weather reigns where one is.

When the water is much above the box of the wheel of any vehicle, it is by no means safe to cross in that vehicle; for not only is the current strong, but the bottom is very uncertain.

Horses and riders can cross extremely bad rivers, provided both be accustomed to the work. Horses have very various swimming powers; some never keeping more than their heads above water, whilst others will hardly wet the flaps of the saddle.

There are several ways of crossing—sitting in the saddle, hanging on behind by the tail, or hanging on by the mane, and allowing the body and legs to float over the back of the horse. In the more dangerous rivers, good swimmers will drive the horse in first, though aware of the possible difficulty of catching him on the other side; then choose for themselves a track and swim over, taking care to make as much use as possible of the current.

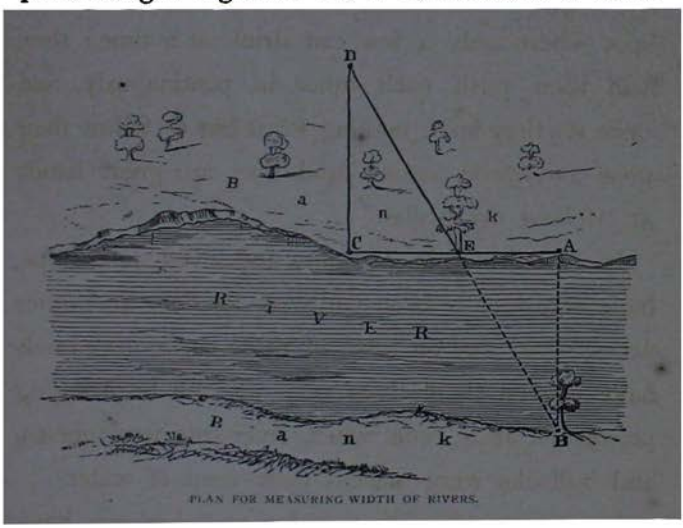
One great danger exists in the frequency with which logs (*aliter* fallen trees) are met with in the Australian rivers; whether grounded or floating, they are by no means pleasant customers.

It is always interesting, and often useful, when

crossing streams, to ascertain their breadth beforehand, and the following is a simple method :—

Suppose the man to be at A, and wishing to know the width of the river in front of him.

Let him pick out, on the opposite shore, a tree, rock, or other notable object, as B. Then let him pace, at right angles to A B, to E, some tree or other



PLAN FOR MEASURING WIDTH OF RIVERS.

mark; and then take an equal number of paces beyond, and thus arrive at C on the plan. Finally, let him start, counting his paces, from C, at right angles to C A, until the tree at E exactly eclipse the tree at B. He will then be at D; and C D will be the same length as A B, which is the breadth of the river.

The figure is readily capable of Euclidean proof by referring to A B and C D as parallel straight lines.

It is often most difficult to prevail on stock to cross a river. One very good plan in such case is to keep them, as much as possible, minus water for two days' journey before reaching any stream of known difficulty, and then take them to some spot where only a few can drink at a time; they will then push each other in continuously, and once in, they have nothing for it but to follow their nose and swim across—and they are great hands at "follow my leader."

In bad droughts, stations, and even townships, have occasionally been badly off for flour and other necessaries; and on some of these occasions camels have proved themselves very valuable in bringing provisions at a time when river-steamers, horses, and bullocks were useless from want of water.

It seems curious that mules and donkeys have not been as yet more extensively introduced, as they make such pleasant animals to travel on, do a good distance, put up with a great deal of hardship, and are blessed with the invaluable quality of being able to work well, on a far smaller allowance of fodder and water than other cattle. In

parts of New Zealand they are a great success, taking packs of 200 lbs. weight over all sorts of rough places.

Pioneers of all sorts, squatters taking up new country, men opening up uncivilized wilds,—all, in short, who look beyond the more settled districts of a country,—need to avail themselves of every form of experience already gained by others with regard to travel.

DIVISION III.

LIFE IN THE BUSH.

CHAPTER XVI.

STATIONS.

SQUATTERS.—EVERLASTING MUTTON.—HEAD STATIONS.—SLABS.—INTERIORS.—FIREPLACES.—PIGS AND PEACHES.—HAY.—EXPENSES.—BOILING DOWN.—WOOL DOWN.—STORES.—BABIES. HOODS.—OPIUM.

SQUATTING is the great industry of Australia: squatters being the owners of flocks and herds, which they depasture on vast tracts of land rented from the Government. These tracts are either called "runs" or "stations," and are of varying extent, ranging from those capable of feeding 2,000 sheep, to those on which can be kept over 100,000. The nature of the country, grasses, climate, &c., determines the proportion of cattle to sheep on a run. Thus we find some stations purely devoted to sheep; and under these conditions people undergo the notorious course of everlasting mutton; roasted, boiled, or stewed, there is still nothing but mutton. On the great majority of stations, however, cattle are to be found: they thrive on land unsuitable to sheep,

either on account of its herbage or of its mountainous or rocky nature, which latter features render it unavailable for shepherding. On some stations only a few milch cows and three or four beasts are kept; on others larger herds are fed, chiefly with a view to supplying beef for rations. The nature of some runs necessitates an almost equal proportion of flocks and herds, and here we have the breeding both of "store" and "fat" cattle. A final extreme is arrived at when cattle alone are fed on the run; and this is the case on mountains, and also on new lands whose herbage is coarse. They become thus a valuable aid in fining down new country, and rendering it more suitable for the finer breeds of sheep, which thrive so well in the climate of Australia.

The different colonies have slightly different laws concerning the taking up of land; but the usual thing is for the squatter to purchase a certain amount of land on which to build his "head" station and outbuildings, and to rent the rest. He will thus become for the time master of a large extent of country; but this will often embrace acres upon acres of useless rock or scrub, and of course varies with regard to its nature very greatly in

different districts. The squatter, besides being owner of a square mile or so immediately adjoining his head station, will occasionally purchase detached patches of small size in distant portions of his run, and on them he will erect his out-stations.

In Australia the buildings of the head station are usually constructed of "slab" walls, with bark or shingle roof. Slabs are rough planks, split out of trees, cut to about ten feet in length and one in breadth; and then they are held in position by means of grooves in beams above and below. The wood shrinks rapidly, and hence it becomes necessary during the building to allow the slabs to remain in their places for some time before finally fixing them. A side of a new house is at first completely filled up by slabs. Shortly, however, chinks between them begin to appear; and these grow, till finally there is room left for the insertion of several more slabs. The shrinking gradually decreases in rapidity, though it continues in slow operation for some time after the building, and usually even after the occupation, of the dwelling; and thus, in the majority of inhabited houses, the chinks and openings between the slabs of the wall are very numerous.

The bark of the stringy-bark gum-tree is the

one most in demand, though the bark of the box gum-tree is likewise very good, for roofing purposes.

There are usually a surprising number of buildings round the head station: they have been run up from time to time in accordance with the wants of the squatter, anywhere and in any order. Long buildings are usually stables; then there are several detached erections containing bedrooms, sitting-rooms, kitchen, forge, men's huts, &c., all having much the same external appearance. Their foundations are long trunks of trees lying down half buried in the earth, their upper sides just levelled to form a resting-place for a beam sawn square: into a groove in this beam fit the lower ends of the slabs, which are held by a similar beam above. The corners are made of rough round posts; and the roof of large slabs of bark, held down against all wind by a rough framework of smaller logs, or even stones saddling the ridge by means of ropes.

Within those tenements set aside for the squatter and his friends there exists a lining of canvas, forming a tent-like roof, and also an inner "panelling" of canvas, which, when covered with paper, puts the slabs out of sight. Thus, though the exteriors look uncommonly queer, nevertheless within all is

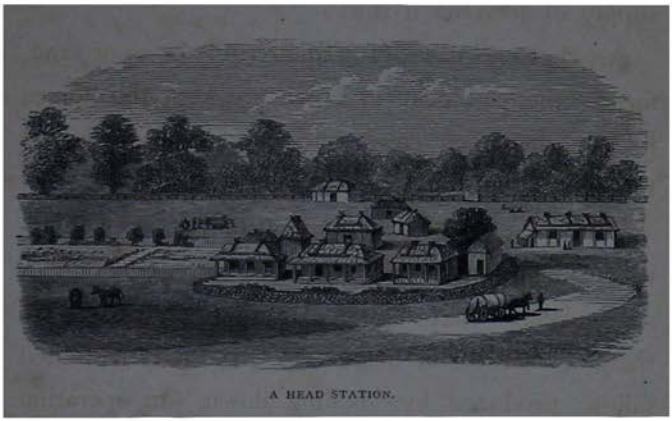
as it would be in a brick or stone building, until the wind begins to blow; and then the paper heaves and shakes, causing the pictures to start forward with mysterious effect.

The fireplaces are peculiar, being built on at one end of the room. Through an opening in the wall a recess is made, some three or four feet square, floored with stone, round which is built up to a height of four or five feet, a rough stone wall, from the top of which rises a wooden chimney, gradually narrowing, and ending a little above the roof. Of course nothing but wood is burned; and these fires are most comfortable in cold weather, as one gets right into the chimney to warm.

There is usually, more especially when there are ladies on the station, a flower garden, and luxuriant creepers over every building; and generally a large fruit and vegetable garden. All fruit requiring warmth grows splendidly in Australia, but very little attention is paid to its proper cultivation; quantity is looked for instead of quality; and thus the peaches, of which one hears as being given to the pigs, are either small, hard, green lumps, or, if large, they are rotten and otherwise damaged; and what men will not eat some pigs will, even in England. Fruit

and vegetables are specially valued up country, where meat is superabundant.

Horses in work have usually to be fed during the winter months, and hence barns full of hay are to be seen. Such hay is made from lucerne, oats, barley, or wheat, as the case may be, grown in the "cultivation paddock;" which generally contains some ten



A HEAD STATION.

or twelve acres, and is frequently manured by folding on it each night such flocks as may come into the head station, and ever and anon shifting the hurdles.

The grain, or seed, put in for hay is watched carefully. The "cultivation paddock" at this period of the year becomes the usual Sunday lounge of the authorities. In favourable seasons the crop will

grow to a good height, but more frequently it has to be cut prematurely. Directly the bright green of the young blades shows symptoms of fading before the heat of a drought, the hay harvest is commenced, and the crop safely stored away in the barns. And thus the squatter defies the many causes which oftentimes combine to render poor the supply of feed on a run.

Another enclosure, of a square mile or so of land, forms "the paddock," in which are kept the horses in use, the milch cows, and perhaps a few beasts for beef.

The expense of a station, including everything, is, in round numbers, £100 a year for every thousand sheep. Saleable stock, hides, and wool are the chief sources of income, to which may be added tallow, produced by "boiling down," an operation carried on on the spot only on large stations, the smaller squatters finding it more profitable to send their sheep to the large boiling establishments, even though they lose fat by the travelling. This is a very useful way of getting rid of old, bad-wooled, or otherwise useless sheep.

It is surprising what an effect is universally caused by the report, per home mail, of the rise of even one

penny a pound in the price of wool; all look glad: whereas a corresponding fall is at once to be read on the face of every squatter. The sheep in Australia, chiefly of the small Merino breed, yield at most 2¼ lbs. of wool in a fleece; consequently a squatter with 90,000 sheep has over 200,000 lbs. of wool for sale every year, and a rise or fall of a penny per pound would make a difference of nearly £1,000 in his income for the year, though all expenses would remain the same.

Perhaps one of the most curious features on a station is the "store." The squatter, having to feed his many employés, has a store and storekeeper, the latter to dispense rations from the former.

The storekeeper is usually some youth getting his "experience," and he takes charge of the store and books, and lends a hand generally on the run. He has to take the rations round to the different outlying stations, either on a pack-horse or in a cart: flour, sugar, and tea only every now and then; but meat has to go out twice a week, unless the system of "ration sheep" be in vogue. Then each shepherd will have in his flock, sheep which he is allowed to kill, they being marked by the "super" expressly for that purpose.

Thus far the store is but a huge larder for the feeding of all hands; but it is another part of the business which most strikes the "new chum" with astonishment. This is the shop department. Towns are often far distant, and it suits neither the squatter nor the shepherd, for the latter to have to go perhaps twenty miles for each of his little wants; such a journey being time taken away from the proper tending of the sheep. Therefore on the station itself is instituted a species of shop, much resembling a township store. The squatter keeps up a supply of tobacco, clothing, saddlery, sardines, kippered herrings, pickles, and other delicacies, not forgetting "lollies," dress pieces, shirts, coats, boots, babies' clothing, ammunition, pots, pannikins, kettles, —in fact everything he imagines can be wanted. These are sold at a tolerable profit, which pays for the carriage up.

A stockman living at an out-station came into the head station to be married. After the ceremony and subsequent feasting, the squatter presented his man with two babies' hoods. The stockman was so struck with the idea that he straightway entered the store and purchased two more.

In the store-books an account is kept for each

man, and the value of what he gets from the store is deducted from his wages. Chinamen will often spend half their year's earnings in opium; and if the squatter refuses to supply them with it, they will only risk his sheep while travelling for some, to the nearest township, for have it they will.

A dray and team of bullocks is generally to be found about a station, and is always useful for one purpose or another, carrying about building materials, or transporting hurdles, &c. during lambing time.

Station life is healthy and comfortable, but often during the busy times, or bad weather of any sort, it gives very hard work, requiring a remarkably strong constitution to stand the strain.

CHAPTER XVII.

SHEPHERDING.

THE SUPER.—FLOCKS.—OUT-STATIONS.—HUTS.—PAPERING.—LAMP.—LORD CHANCELLORS.—FURNITURE.—SHEPHERDS' WIVES.—LOST SHEEP.—CHANCING.—DINGOS.—LAMBING.

THE tug which started Australia on her voyage through the variable and head winds she encountered in the first part of her progress to civilization, was wool. Sheep and their belongings still occupy the attention of the great mass of people in the country.

First of all we may take note of the various ways of producing or "growing" the wool; and afterwards of the ways of preparing it for the market.

Wool being grown on the backs of sheep, their management is a most important item. They are taken care of in two different ways. The first, that most common in Australia, consists in dividing them into flocks, each under the charge of a shepherd. The other method, greatly practised in New

Zealand, is that known as "paddocking," or fencing in.

Concerning shepherding first. The sheep are under the charge of the "super" or overseer. He, in most instances, is an embryo squatter, in the more advanced stage to that of storekeeper. His next step will be into the shoes of manager for some squatter, who retires to enjoy the world in Melbourne, Sydney, or London; though, if he have money, he will turn squatter on his own account. But, whatever his future plans, at present he is overseer of sheep, and thus has the management of all flocks, shepherds, and their concomitants. The sheep are divided into flocks of from twelve to eighteen hundred each; each flock is composed of some special class of sheep, whether ewes, rams, or wethers; and these are moreover all classed according to age, their years being marked on their ears by sundry notches and holes. Each flock is handed over to the care of a shepherd, who becomes responsible for its well-being. In return he receives a certain sum, say thirty-five pounds per year, has a hut to live in, and receives also one ration—*i.e.* 12 lbs. of meat, 16 lbs. of flour, 4 lbs. of sugar, and ½lb. of tea—per week. If he have a wife and

children, he, on hiring, makes a stipulation to receive an extra ration or so.

About the run are dotted "sheep-stations," or "out-stations," consisting of a hut with sheep-yards attached. One or two flocks are stationed at each of them, and there the shepherd lives. And to each flock is allotted a certain space, bounded here by a ridge, there by a creek, and so on.

On approaching a sheep-station one sees ahead a more or less cleared space, and the ground of a peculiar green tinge, which is due to the fact that the yards, in which the sheep are kept at night, are continually shifted; and the ground in that way becomes well manured, and soon covered with a carpeting of bright green.

Probably round the yard and hut, dawdle a mixed mob of quiet cattle and horses. They clear out as we ride up. Suppose no one at home, rations to be delivered, and the door locked. Just at the base of the chimney we see a lot of old bottles, and among them the key is probably "planted," *i.e.* hidden; but the horses have been licking and kicking these bottles all over the place, and the key is not to be found; so we smash the door open, and put the rations inside.

The hut is of oblong shape, slab walls, and bark roof, with heavy wooden framework of "riders," to keep the bark from being blown away; the usual large fireplace projects at one end. Round it and over it creep pumpkin plants; and, chained to old logs and boxes, three or four dogs snarl at the new arrivals.

SHEPHERD'S HUT.

Entering at the door we find the great square of the fireplace on our right, with the never-failing "billy" standing in, or hanging over, the ashes of the morning's fire; a piece of iron hoop is almost invariably to be seen kicking about somewhere, and bent into the form of tongs—its object and use being to prevent smokers from burning their fingers when "lighting up."

On the immediate left runs a division, through an opening in which, can be discovered one or more rough bunks or stretchers.

The floor is usually bare earth, and the slabs of the side walls shrink, and let in a good light, accompanied, in fine weather, by a cool refreshing breeze, and, in wet weather, by a damper in the shape of rain. Very often, especially where a wife exists, a good lining puts a stop to these invasions of nature,—the favourite material for this purpose being newspapers, which, if they be *Illustrateds* or *Punches*, form a most interesting picture-gallery,—to the great comfort and convenience of anyone taking shelter within during bad weather. And oftentimes curious old shepherds will act as guides to these galleries, adding much to the entertainment by their remarkable ideas concerning the men and things portrayed on the walls.

On one occasion I stayed some days in a shepherd's hut, papered with *Illustrateds*. This hut was inhabited by a rather gentlemanly old man, white-haired though yet hale and hearty. I could trace from his conversation that he had once been in the navy, but he was shy of letting out in what capacity. He knew the histories of nearly

every print, having evidently well studied the papers before pasting them up, for after that operation no, what children call, "reading" remained visible.

In the evenings this old gentleman delighted to call attention to certain pictures, and to relate what he knew concerning them. But his memory was evidently on the decline, and it was often all one could do to refrain from bursting out laughing at some of his strange jumbles of dates, names, and places.

There was one picture near the roof he was particularly fond of yarning about; from his representations it should have been the portrait of one of the great Confederate generals, concerning whose battles and goings-on he never tired to tell.

Gazing at the face, in the dim light, it appeared to me that the general wore a bonnet. So one evening I determined to solve the mystery; risking myself on the rickety table, the old gentleman handed me up an old sardine box, full of fat, with a piece of lighted rag jammed in one corner; and, with the aid of this lamp, I made out the features and name of one of our Lord Chancellors. However, the aged guide would not be persuaded but that it was his

favourite general, despite the wig, and absence of warlike hairs on the face.

The table is usually formed of a sheet of bark, its smooth inner surface uppermost. Then there are various specimens of rude furniture, in many instances partaking largely of the ornamental. Meat safes are formed of wooden boxes, with tin fronts, pierced in elegant and chaste designs.

"Celestials" make capital shepherds; and, where they are, is always to be seen a neat little bit of garden for vegetables.

Where there are families, fowls and pigs appear, and occasionally horses, and even a few beasts.

More especially on Sundays, one often meets shepherds' wives cantering about the bush paying their visits to one another. The saddle, habit, and feather in the hat are the only expenses; the horse costing but little in the first instance, and being hobbled out to feed gratuitously when not required.

The shepherd is supposed to start his sheep from the yard about sunrise, to keep with them all day, and to see them safely into the yard at sundown, in all materially assisted by his one or two dogs. His presence with the flock is required in order to keep

the sheep on their proper country, and not allow them to trespass on the grass belonging to the next flock, nor indeed to allow them to approach any flock whatever, as in such case the probability is they would get "boxed." He has also to see that no sheep stray away; and this is often a very difficult job in rough or rocky country. In the event of his losing any sheep, his proper course is to go into the head station, after putting the remainder of the flock into the yard, and to report the loss. Then next day all available hands turn out to look for them.

A good shepherd will so plan that his sheep take a different tour each day, and thus make the most of his grass. Old sheep usually make up a very steady flock, and its shepherd will often "chance" it—that is, he will start them in the morning, go out about mid-day, and turn them for home, and there receive them at sundown.

Some flocks will shepherd themselves entirely, going away in the morning and returning in the evening. I knew an instance in which an old shepherd, whilst mending the roof of his hut, fell and injured himself so much as to be unable to move out for three days. His flock was seen each day properly

shepherding itself, and therefore no one was aware of his misfortune, until the storekeeper happily chanced to arrive with the weekly rations.

Of course in these cases there is great risk of lost sheep; and also a fine opportunity given to the sheep's great enemy, the Dingo, or "native dog;" though occasionally his name covers the depredations committed by civilized dogs, run wild, or even merely of a savage disposition and hungry. The dingoes are essentially nomads; they appear but to disappear. Thus it is that one is never sure whether they are on the run or not; and when any do come, however quickly they be killed, others are certain to supply their places.

There are various devices employed for ensnaring them—one of the most successful traps being composed of saplings firmly fixed in the earth, and all bearing upwards and inwards, at a gentle angle, in a circle. A dead sheep is placed within them. The dingo climbs up the outside slope, springs down the hole in the centre, and finds, after he has had his dinner, that the slope is now the wrong way and egress impossible. By this method several can be caught at the same time.

The more common plan adopted is that of poison-

ing: a little strychnine is put in small pieces of meat, which are dropped about as baits. But this method is not always successful, inasmuch as the "dogs" soon become very shy of picking up odd pieces of meat; moreover, it is dangerous for the station dogs.

Another good way is to kill a beast, that for some reason ought not to live; then skin a small part of his back, make several gashes, and put a little poison in them: the "dogs" are certain to attack the skinned part first; and each dog who has not taken too much of the poison, is dead by next morning. The greedy ones come off best, as sickness supervenes.

In mountainous parts, where dingoes occur in any numbers, it is usual either to build dog-proof yards, in which to keep the sheep at night, or to kennel the sheep-dogs all round the yard: their barking, together with the howls and yells of the attacking party, is sure to arouse the shepherd, who fires off his gun, which will frighten away the dingoes, for a time at least.

The dingo himself is large, with a bushy tail, somewhat resembling a wolf. He is usually of a reddish colour, though occasionally found black.

His howling at night resembles much that of the jackal in other lands.

Towards the end of the winter, busy times are heralded in by preparations for the "lambing" season. Certain patches of country are reserved, and on them are erected "lambing stations." A small "gunyah" or hut is run up, with bark, &c., for the men; and then there are several bough-yards made. Trees are felled to make the foundation of the fence, and their branches lopped off and rough-piled along to render it sheep-proof.

A flock of ewes proceeds to one of these stations, hurdles are sent out, and also four or five men. One of them becomes "hurdle man;" *i.e.* he stops by the yards, and looks after the ewes and young lambs brought thither in the evening. It is his business to prevail on all ewes to take kindly to their tender offspring; and often this end can only be obtained by hurdling the mother and child close together for some time.

Another man, each day, shepherds out the flock of ewes, and performs all functions connected with "dropping down." He notices when each ewe has her lamb; he leaves her there until on his way home towards sundown, when he passes back along his

morning's route, collecting mothers and their little children, now able to walk; and these he hands over to the hurdle man. So he proceeds day by day, till all the ewes have been "dropped." Soon after the commencement of lambing, other men are required to feed out the lambs of various ages, and see that they are kept to themselves.

CHAPTER XVIII.

PADDOCKING AND SHEARING.

SHEPHERDING VERSUS PADDOCKING.—WOOL-SHEDS.—SMOKE-OH !—SHEARING.—WASHING.—SEEDS.—BATHURST BURR.—FOOT ROT.—SALT.—TOOT.

THUS much for shepherding: we now come to the other system of keeping sheep, namely, "paddocking," which prevails in some of the colonies.

A run is cut up into several portions, or "paddocks," by sheep-proof fences. Such a paddock will often feed ten to fifteen thousand sheep. Into one are turned ewes, into another wethers, into another rams, and so on.

The sheep are left entirely to themselves till shearing time; and then a certain amount of expense is entailed by the process of "mustering," or gathering the sheep together; to accomplish which, many extra hands are required. If the country be mountainous, or in any way difficult, the

sheep will probably have to be mustered two or three times before all the "woolly" ones have been in the "shed." This plan of working sheep appears at first sight infinitely more economical than the former one, but on comparison the two will be found to be of very equal expense.

Shepherding should be resorted to in fine-grassed countries; paddocking serving best for coarser land.

Shepherding has these advantages:—

1. *Keeping the sheep well in hand.* Division into flocks helps greatly in the classification of the sheep. No ewes are allowed to have lambs till they be of a proper age; bad-woolled sheep are draughted into a particular flock, to be fattened for slaughter or sale. No useless sheep are kept. And it is mainly owing to this looking after every individual sheep, as it were, that Australian wool has gained such a great name for "fineness."

2. *No fear is entertained of the attacks of wild dogs.* The dingo was probably one of the causes of shepherding in Australia, and thence of the value of the wool.

3. *There is not the expense of mustering.*

But then there are these disadvantages:—

1. *The sheep are more liable to diseases of all*

sorts: standing in damp yards on rainy nights; not living a free and natural life.

2. *The chances of lost sheep:* giving great trouble and expense, by needing the employment of all hands to look for them; and great risk of the missing ones being, more or less, bitten by "dogs," before they are recovered.

3. *The expenses of lambing*, and shepherds' wages.

Paddocking boasts of:—

1. *Extraordinary health of the sheep:* they leading a wild life; finding for themselves warm and dry camping-places; in hot weather being at liberty to feed at night, &c.

2. *No losing sheep;* no trouble or expense in looking after them.

3. *Absence of shepherds' wages*, and all expenses connected with lambing; the only outlay being the first fencing, and one or two boundary riders.

But then against it stand:—

1. *Much refinement of flocks not practicable.*

2. *Chances of unchecked attacks by wild dogs.*

3. *Expenses of mustering.*

It will thus be seen that *shepherding* is best in countries where predacious animals exist, and where fine wool may be favourably grown. But, that *pad-*

docking is best where no wild dogs are, and where coarse wool can be grown in plenty.

Wool, to fetch the highest price, should be fine, with good length, and soundness of staple; but it must also have elasticity and softness. The fine, small breed of sheep giving such wool, has a fleece which would but average a little over 2 lbs.; whereas the larger and coarser animal will have a fleece of from 4 to 6 lbs.: and thus it is that one produces about as much value of wool as the other.

Sheep-breeding in Australia has received special attention. From the earliest times valuable stock has been introduced into the country, and large sums of money invested in procuring the best blood from Europe. Already stock rams of excellent pedigree, but Australian born, are taking the place of sires formerly imported at marvellous prices.

Having now grown the wool, it must be prepared for the market. Immediately after lambing, commences the great business of the year, that of shearing. Near the head station stands a large building—the wool-shed. Though of various detail in arrangements, material, size, and style, yet all sheds have certain points in common. There are the "floors," where the shearers work; there are

the sorter's table and bins, the pens for the sheep, the press, and a large amount of room for the stowage of packed wool.

Shearers, and all others required, turn up at the moment, engage themselves for the time, and all live together in the "men's hut." They are paid by the number of sheep they shear, and get fed by the squatter, or not, according to agreement.

As many sheep as possible are placed in the shed overnight, in order that the fleeces may be perfectly dry by the morning.

Very early each shearer takes up a certain space on the "floor." Then each goes into the pen, and hauls therefrom a sheep, which he shears. In some sheds each man marks the sheep when shorn, and turns it into a common pen, which, when full, is counted out; and each man, having previously given in his number, is thus checked from giving in too many. A much simpler plan, however, is to allow each man a pen of his own, into which to turn his sheep when shorn.

At stated times throughout the day there comes a general spell, commenced as soon as the phrase "smoke-oh!" is heard.

There are two or three men, or boys, wandering

about picking up the fleeces, which they carry to the table, and spread thereon. The wool-sorter, and his helps, tie up these fleeces, and put them in their proper bins; which are divided off to hold combing, clothing, and other classes of wool.

Then the "pressers" fill bales out of one of these bins, sew them up, and brand them; and so the work goes on from day to day, till the whole flocks have been shorn; and the packing keeps pace with the shearing.

The squatter and super are overlooking the whole business, and especially watching to see that the shearers do not slur over their work in their desire to get through large numbers in a day. Bad shearers will strive to accomplish this end, either by not shearing clean, or by mercilessly hurrying off all the wool, utterly regardless of severe clips and snips of the poor animal's skin: such shearing both spoils the fleece, and the sheep which produced it.

While this work is being carried on in the shed, another gang of men is "washing." In some handy creek the wash-pool is made, elaborate or rough as the case may be. Some are fitted with hot water, spouts, &c.; others again are of very primitive construction; a mere fenced-in portion

of water in which the animals are thoroughly soused. The sheep are washed some three days before they are shorn, in order not only that the fleece may be quite dry, but also that "yelk" may have had time to rise.

The difference in the soils on which the flock have been depastured, has a great deal to do with the whiteness of the wool; some fleeces barely requiring any washing, whereas others will hardly ever come clean.

There are certain seeds which become entangled in the wool; the most teasing, perhaps, being the "Bathurst burr." This troublesome seed appears to have first made its appearance in Australia on the tails of some imported sheep; and now the plant itself grows, and spreads itself in all directions. The usual way of keeping it under is to cut down the plants, and then burn them. But in certain places a great deal of good may be done by turning bad-woolled sheep into ground overgrown by it, allowing them thus to gather the seeds in their wool, and, when fat, selling them to the butcher. The sheep will thus carry off large quantities of the obnoxious seed in wool which is of no particular value. By this means, though the plant is not

eradicated, nevertheless its spreading much on that particular run is prevented, and the seed thus carried off is destroyed by those who manipulate such wool.

The dreadful diseases of scab and catarrh are rigorously guarded against by law, and it is to be hoped will gradually die out.

One of the chief evils of "yarding" at night is the likelihood of foot-rot therefrom ensuing. This disagreeable ailment originates in injuries to the feet from thorns, &c., for the hurtful reception of which the feet could not be better prepared than by standing all night in the species of warm poultice found in sheep-yards. It is unknown in places where the sheep are left to themselves to camp where they please.

Fluke, which is caused by the presence of a small leech in the liver, is produced by sheep feeding over wet land on vegetable matter in a state of partial decomposition.

The heat of the sun and action of the air abstract from the herbage those salts whose presence prevents the existence of the larvæ of fluke. This is one of the reasons why it is necessary to allow sheep a good deal of rock-salt. Shepherds carelessly leave it out in all weathers, and thus the

salt gets rapidly wasted. Some would prescribe a mixture of ten parts of salt with one of copperas (powdered sulphate of iron). This would be easily placed in troughs, in small quantities at a time, and so would not be wasted.

Hove is a peculiar disease caused by the feeding on vegetables that have grown too rapidly, which, not being matured and perfect in all their parts, ferment much faster.

The "toot" of New Zealand, and other plants, are well known to kill both sheep and cattle: as at certain seasons they will greedily devour it, eating too much and too fast; their bodies swell until they share the fate of the frog in the fable. In South America the miormo, a grass which has a poisonous effect, is piled in heaps and burnt to windward of a yard of sheep; they become so nauseated with its vapours, they will not look at it when they meet with it on their feeding-grounds. Some such plan with regard to toot might be tried in the colonies, possibly with good effect.

Flocks feeding on the boundaries of runs, and also along frequented roads, are usually branded on the nose, in order that, should they box with strange flocks, they may be the more easily drafted.

CHAPTER XIX.

CATTLE HUNTING.

CATTLE CAMPS.— BRANDING. — STOCKMEN. —"DUFFERS."— "NUGGETS."— MUSTERING. — COACHING. — HARD RIDING. — SPINS.— SCRUBS.—"GO IN BIG LEMONS."—ENTRY OF THE WILD MOB.— STOCK-WHIP.

FROM sheep we pass on to cattle, which are entirely left to take care of themselves; and this freedom is allowed on account of their well-known habits of attachment to peculiar localities.

They will form themselves into "mobs" of from six or seven, to over a hundred, and for a long period will hover about the same "camp," *i.e.* some favourable spot under trees, &c., to which they retire at night. These camps are to be met with on all sides; being used by many cattle for many months, the grass is worn away; but the ground, at the same time, being plentifully manured, a scanty and low herbage springs up, and covers the soil with its peculiar bright green colour.

We have already seen that cattle are kept on

stations in larger or smaller numbers, according to the comparative suitability of the country and the grasses. They usually fall to the care of a similar functionary to the sheep "super," who also takes the management of the station horses. He has under him one or more stockmen, and at mustering time, extra hands are taken on.

The cattle are allowed to feed where they please; but once a year every beast is got in, and all calves are branded. This branding is rendered necessary by the peculiar state of the country. There exist no fences to separate the various stations, and large numbers of cattle and horses feed about, and frequently get into neighbouring runs. In fact, along the boundary districts of two runs, the cattle and horses of both owners feed together promiscuously. They too are apt to stray far, and so each beast is made to carry with it some proof of its belonging to somebody in particular.

Every owner of beasts or horses has to register his particular brand with the Government, and lists are issued, so that no two brands may be the same. Then all horses or beasts of which he becomes possessor he marks with his brand.

It is the duty of the stockmen to watch all cattle,

see which are fat enough for killing or for sale; notice where the bulls are; look out for stranger beasts; and watch any fresh-born calves as yet unbranded: these latter go by the name of "nuggets," and, should they wander on to a neighbouring run, they may possibly receive the wrong brand past all redemption.

Unluckily, cattle-stealers are by no means so rare as would be desirable: they are locally known as "duffers;" and one of their great aims is to brand all nuggets they can lay hands on. When the case can be proved against them the sentence is usually very severe, as indeed it ought to be, considering the ease with which the crime can oftentimes be committed, with but bare chance of conviction or even discovery. These gentry are, moreover, by no means averse to making a feed off a chance bullock of some neighbouring squatter. They will drive it away to their hut, kill it, devour it, and sell or use the skin; having first carefully cut out the brand and destroyed it. The bolder among them have been known to drive whole "mobs" away to a distant district, and there sell them. And hence, stockmen on a run have to keep a look-out for the disappearance of any cattle.

This work is by no means so difficult as it appears at first sight. Beasts usually keep with the same mob, and this again usually remains in one fixed locality, which the stockman visits periodically, and the mob is easily recognized by the peculiar colour, size, or shape of some one or two of its more prominent members. Once a year every beast belonging to the squatter is brought into the stock-yards; each portion of the run is visited in turn, and all the cattle feeding on it are driven in. Some are turned out again straightway; calves are branded; other beasts are kept for slaughter, and others driven off for sale. In short, "mustering" is the great event of the year with cattle. As they have then to be brought into "the yards" in detachments, great work is done by riders.

In mountainous and rough districts the cattle are often very wild, and the method usually entered upon is that termed "coaching." The "coaches" are a mob of quiet cattle, to the number of one hundred or so, which is taken by six or eight men, mounted on horses well up to the work, into the rough country. Then these "coaches" are stopped on a cattle camp; some of the men stay by to keep them on it, and two or three go off into the

mountains and endeavour to hunt any wild mob which affects that locality towards the coaches.

And now is the time to behold wonderful feats performed both by men and horses. The latter are of all shapes, sizes, colours, and kinds, and make headway over rocks and stones in a manner that can hardly be credited till seen. Stumblings and injuries to legs are of remarkably rare occurrence. But the sight of all, is to see a really good horse working cattle down the side of a steep hill, springing and dodging about to avoid rocks and other obstructions; at the same time "propping" continually, to obviate gaining in the descent an ungovernable speed. Rocks, stones, and declivities afford, however, but half the difficulty. Trees of all shapes and sizes usually abound in such localities; twisting and branching in every direction whilst alive, and, when dead, standing as stumps or lying about scattered as huge logs or branches, all more or less charred by the frequent bush fires arising from the power of the sun's rays, aided by a long drought.

In some places grows a very tall grass, galloping through which, the rider comes right on to a water-hole or bog before he knows where he is.

Again, one often meets with thick patches of saplings, through which it takes a heavy horse to crush his way. It is most exciting work, galloping after and dodging cattle in such country as this; and during a "spin" there exists one unbroken and severe strain on the nerves and energies of both horse and man. The gallop is one continual avoiding or clearing of obstacles.

In other parts exist extensive scrubs, out of which even Australians despair of forcing the cattle by the aid of horses; and if an Australian on a good stock-horse cannot achieve the job, certainly no one else could. Stratagem has to be resorted to; and the beasts have to be caught feeding outside the scrub, which they only do by night. Accordingly this work is particularly dangerous, as galloping over very rough country is by no means safe, even on the brightest moonlight nights, which are generally chosen for the job. Occasionally favourable circumstances render it possible to force the cattle from the scrubs by the aid of fire, but so powerful a destroyer has to be used with immense caution in a country like Australia.

As with most excitements, bodily safety becomes of secondary consideration, and people will risk

their necks merely to turn or "wheel" a mob of cattle. A boy, as soon as he gets old enough and strong enough to manage a horse, delights in mustering. He will then, in his Australian, "go in big lemons" whenever he gets the chance. But as manhood creeps on, so there arises respect for his own neck, possibly engendered by thoughts of a wife and a home; and as he comes to years of discretion, he will begin to ride with more caution, if not with more judgment.

Often has the young hope of a house been cut off in his prime, in some madcap attempt to wheel a few wretched cattle. But such occurrences induce no prudence in his companions, because, on the other hand, hairbreadth escapes are so frequently encountered, that the young Australian becomes emboldened to rashness.

While we have been considering these various features of cattle-hunting, the three men have been absent from the "coaches." But now a faint and distant crack is heard, and the men in charge of the mob immediately knock off yarning, and listen;—gradually the shouts of men, the cracks of stock-whips, and the barking of dogs become more and more distinct. The "coaches" prick up

their ears, look about, and are all attention. Then a crashing over sticks and stones, and the wilder cattle smash into the quiet mob with a rush, knocking about all that comes in their way. At first they will move restlessly about in the midst of the mob, ever and anon striving to break away,

CATTLE HUNTING.

but their attempts are always frustrated by the men in charge.

When the three men who have been away come up on their sweating horses, coaches and coachees are taken, at a walk, to some other camp. One of the men, who is up to the work, and who also

knows the country well, will ride on ahead and "lead" the mob. Then the others ride at either side and behind. The leader not only shows the way to the next camp, but also tends greatly to steady the cattle. The three or four wildest are pretty sure to be trotting along in the front ranks of the mob, ever trying to rush ahead or to the side, but as often stopped by the man there riding.

The stock-whip is of great use in this work, not so much on account of the severe cut it is capable of inflicting, as for the grand crack it makes; this part of the performance requires, for its proper and effective execution, much practice. Like most whips, that of the genus "stock" is composed of two parts, viz. the handle and the lash: the former, rather over one foot in length, is usually made of some choice wood; at the butt it is about 1½ inches in diameter, and thence it tapers off to the thickness of an arrow. The lash is often ten or twelve feet in length: those made of green hide are considered the best; the near end is thin, but in about half a foot or so it has filled out to its thickest, and thence it gradually tapers till it ends in a silken or horsehair cracker.

All boys living in the bush begin to crack whips from their earliest years, and certainly it is a remarkable sight to see a good hand whirling the huge lash and cracking it in every direction. "New chums" are ever too chary of allowing the lash full swing; once they have confidence to allow it to fly out full length, all is easy work.

CHAPTER XX.

CATTLE DRAFTING.

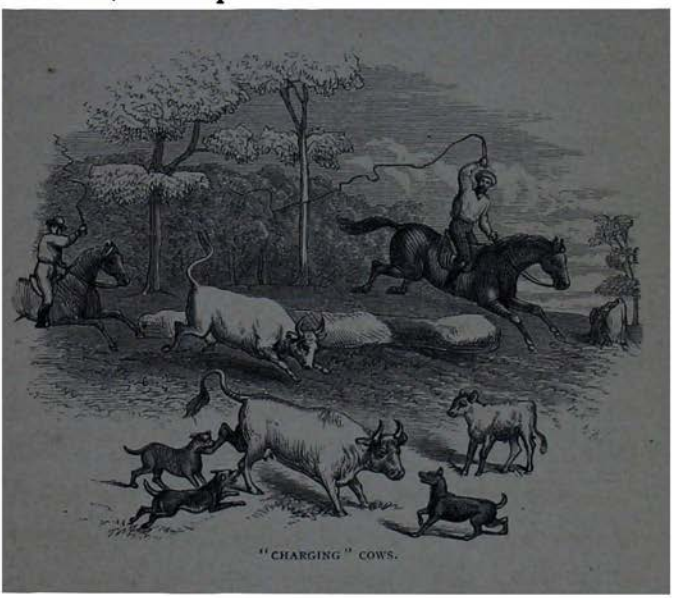
CHARGING COWS.—DOGS.—HEELING.—DISOBEDIENCE OF DOGS.—MASTERS' STUPIDITY.—TRAINING.—YARDS.—DRAFTING.—BRANDING.—OUTSIDERS.—NOTICING BEASTS.—"POOR MAN'S FRIEND."

THE beasts that give most trouble in driving, are cows with calves at their sides. Their "charging" is of a most dangerous species, as they do it with their eyes open and all their wits about them. They do not blunder forward as a bull does, but turn and dodge and follow the object of their wrath. They will hang about the tail-end of a mob, and continually strive to drop out. A man on a horse is of no use, as the cow will but charge him, to the great danger of the horse, which occasionally becomes motionless through fright.

Dogs now come to the assistance of man. Directly a cow or other beast drops out of the

mob, she is surrounded by the dogs, which attack her according to their various powers.

Some will hang on by the nose, others by the tail; the generality, however, stick to the "heeling" business, and nip the heels and hocks in a mar-



"CHARGING" COWS.

vellous manner. Some dogs are particularly clever at this work, and appear to catch the heels alternately in their mouths as the cow kicks at them. The beast very quickly gets enough of this sort of thing, and trots off, bellowing, to the mob.

Next to their horses, stockmen are proudest of

their dogs, and it is remarkable how often one comes across the "really best dog in the country."

The great drawback with cattle-dogs seems to be their disobedience, but this is apparently more the fault of their masters than of themselves. These men always expect their dogs to understand English without the least previous education. The puppy, when strong enough, is taken out with cattle; by nature, and by precept from the other dogs with him, he attacks a beast, and takes infinite pleasure in the work; then his master sings out, "Come off there; that 'll do," and probably with strong emphasizings. Through all the excitement it is just possible the dog may hear his master's voice, but of course he is utterly ignorant of his meaning; and then he receives a savage thrashing. He gets a licking every time he does not come off; and so, very probably, after a while he will never go near a beast, unless carried away by unusual excitement, and thus many a dog is spoiled.

It is just as if a gamekeeper should expect his young pointer, previously perfectly untrained, when in the full flush and excitement of for the first time seeing a covey rise right under his nose, to drop to wing: or, in the event of the dog's not doing so,

his administering a hearty licking; and then, next time the poor puppy comes on the scent, he, if he be a really clever, sensible dog, will leave it immediately, connecting it with a certain tremendous basting he has lately received. There are few who are not liable to a loss of temper, but what we may well call brutal attacks on dogs are by no means rare, when out after cattle; and, moreover, the poor dogs are sworn at and spoken to as if they had a perfect knowledge of the English language.

Thus many dogs early become useless after cattle. A dog must be either very spirited or else very stubborn, and even dense, to continue this work during several years of such treatment, though thus he may at last catch the meaning of his master's shouts.

Then as age creeps on, and he becomes tired quicker, he will begin to notice when a beast has had enough, and thus many a dog will "come off" at the right time without being told. And such dogs are usually pointed out as triumphant proofs of the success of their training. A really good cattle-dog is rarely, if ever, seen, save of extreme old age.

A dog very quickly understands difference of tone, and is very apt at picking up the meanings of a few different words. A good gamekeeper will always have his puppies drop to hand, come to heel, &c., before they are many months old. But then his commands will consist of but one word each, and that word always the same for the same requirement; whereas a wretched cattle-dog for the same requirement is simultaneously assailed on all hands with different words and even sentences, "Come off there," "That'll do," "Come out o' that," and many other phrases, always intermingled with more or less forcible oaths. The poor dog suffers much by this treatment, and the man loses the use of his dog, all through not training it up from its youth to the knowledge of, and implicit obedience to, three or four words, such as "Heel," "Come off," "Lie down," or any other words he may decide on; but the words and their meanings must never be changed.

When the mob of cattle has arrived at another camp, some other men ride off to fetch more wild cattle, while those who went previously stay to rest their horses, and so the operation is continued till it is time to be off home to the "yards."

These are usually situated near the head station. An acre, or more, is enclosed by a rail eight feet in height—strong posts are planted in the ground, and four slabs let in horizontally between them; then along the top is fixed a rounded rail. The whole space, so enclosed, is subdivided into many divisions by the same species of rail. In some corner there is a "bail," *i.e.* a lane, or species of funnel, up which a beast is driven till it is finally closed in at the top, and its head firmly held by slip bars. In this trap may be caught and held the wildest of beasts, and it is specially useful with wild horses, as they are thus brought within easy and safe reach. The openings from one yard to another are either blocked with slip-rails or with gates, the latter being usual in smaller yards.

A mob is generally brought in towards evening and left in one of the larger divisions till next morning. At an early hour the men go down to the yards, and pen the cattle up in the smaller yards, more specially adapted for drafting. If the cattle be at all wild, they will often charge the men, who then have to fly to the fence, and swing themselves up to the top rail, clear of the

bullock's horns. Sometimes, if the charging beast be at all weak, it can easily be kept off by repeated thwacks on the head with a big stick.

In the lesser yard there is a gate, at which one man takes his stand; this opens into a still smaller yard, with two or three gates to it, each attended by a man. Into this yard a few beasts are driven, and then they are let out one by one through either of the three gates, as may be required. One will let through calves to be branded, together with their mothers, should those mothers refuse to part from their offspring. Another gate will open into a big yard, and through it will be let all cattle not wanted. This is the "bush" gate. Then, if a beast is required for any particular purpose, he is turned into the other yard; and so the drafting goes on till all are disposed of, and then branding is taken in hand.

A fire has been previously lighted outside the fence, and in it the branding irons are heated to a red-heat. A young calf is now lassoed with a rope, plaited of green hide, which has an iron ring at one end. A smaller rope of the same description is then noosed round one hind leg, and the little bellower is thrown on his side. His head is held

down either by somebody thereon sitting, or by a plank, one end of which is inserted under the bottom rail, and the other weighed down by a man. The hot brand is then passed through the fence to the brander, who presses it firmly against the skin of the calf; it leaves its indelible mark on the animal, which then is allowed to rise very frightened, and possibly a little hurt, but never much.

For beef, the beast is usually dropped by a bullet in the forehead. After bleeding is accomplished, the carcase is wound up on a gallows, skinned, and cut up.

At musterings, stockmen from the neighbouring runs will usually assist; more especially if "outsiders," or cattle running on the boundary, are to be got in. These men then take home from the yards any of their masters' cattle which may have been got in with the mob.

It is wonderful how all stockmen can read brands on beasts, even a long way off; and it is also remarkable how almost unconsciously they fall into an inveterate habit of taking full and particular mental notes of the colour, brand, sex, horns, or other peculiarities of every horse or beast they

see. This feature of almost unconsciously noting beasts and horses seen on a ride, is the invariable result of residence in the bush. During the after-dinner smoke some time is usually occupied in a mutual interchange of this species of observation. The cattle "super" questions the storekeeper as to whether he had seen near some particular spot "a small mob with that big strawberry with the long horns." And thence commences a series of questions which lead a stranger to think that the whole station had been out that day in search of horses and cattle possessing any very peculiar features. The stranger, however, if he possess bush experience, may prove of considerable use through having unconsciously marked the peculiarities of some beast he passed on his road.

A great deal of drafting is often done away from the yards, whilst driving the mob; such beasts as are not wanted being cut out of the lot by a man on a good horse, which will soon find out which beast is required, and follow it in and out and all about the mob, until he succeeds in separating it therefrom.

This work is very surprising to a new chum, inasmuch as the horse makes one continual succes-

sion of dodges, dead halts, sudden turnings, &c., all among sharp horns and their frantic owners.

Green hide, that is to say fresh skin of beasts, is of great use in many ways, and has well earned its sobriquet of "poor man's friend." Horses are hobbled with it; whips made; in fact, everything where a good and lasting tie is required, is accomplished by this means.

Cattle on a station supply green hides, milk, and meat, and form fat and store mobs for the market; and were there but facility of carriage, an immense deal might be made out of the horns, hoofs, and other parts now thrown away, of the hundreds of beasts killed every year on stations.

CHAPTER XXI.

HORSES.

PADDOCK.—STOCK-HORSES.—"BUCK-JUMPING."—WILD HORSES.—TRAPS FOR THEM.—HORSE SHOOTING.—HORSEHAIR.—COLONIAL SADDLES.

UP in the bush, everything, possible so to do, is done on horseback, and hence on a station are kept large numbers of horses—some for buggies, some for carts, some for those looking after the sheep, but the majority for the use of the cattle people.

Near the head station is the fenced land called the "paddock," and in this are kept the horses for present use, all others being "turned out to spell," to roam at large in the bush, and so refresh themselves. Oaten or wheaten hay is usually grown as fodder for the winter months, and also for such times as the ground may become bared by drought.

The horses run small, but are capable of standing a marvellous amount of rough work. The stock-

horses are quite *sui generis* for the way in which they travel over rough country; from the rider no guiding is required, merely a power of sticking on, and standing by to duck under branches, &c. A good horse will keep one's knees clear of all trees, which is somewhat advantageous where trees are so plentiful.

"Buck-jumping" is a well-known vice among Australian horses, and is probably due to the fact of their being but rarely thoroughly broken in. Owing to various causes, want of grass, &c., horses are continually turned out for a spell into the bush, and then, in their freedom, they are inclined to resort to the pranks they were wont to play before they were broken in. And thus, through not being continuously in hand each time they are so turned out, they are liable to lose much they have learnt when in work.

In some districts roam numbers of wild horses, and not only do they eat grass, of great value to the squatter, but they attract to themselves others, and tempt previously well-conducted horses to their own evil courses.

Moreover, wild entires are by no means rare with such mobs, and they of course tend greatly to spoil

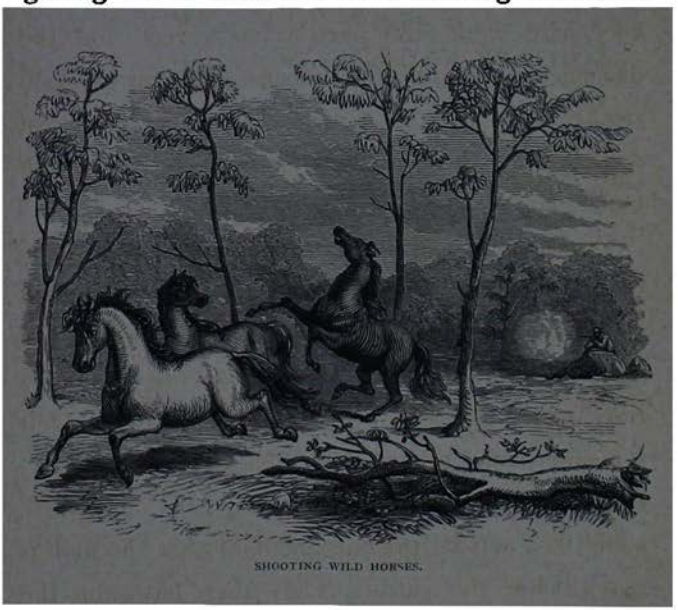
the breed of the station horses, and have therefore to be destroyed.

The greater proportion of these wild horses are worthless; a large number of them being more or less "screwed." Driving the horses into the "yards" is sometimes put in practice, but it is very hard work; the pace is so severe and the distance so long, that it knocks up many a good stock-horse. When practicable, however, relays of men take up the running, thereby doing away with much over-exertion.

Occasionally wild horses are trapped. Across some gully, connecting two feeding-grounds, is constructed a yard of trees, branches, and logs. Two openings are left where the two sides cross the inevitable track to be found in every gully. All is then left for some time, till the wild mob have become perfectly accustomed to passing through; and then, some day, a party go out and find that the mob is (say) below the yard. They then block up the upper opening on the track, and proceed to make a circuit round beyond the wild horses. They approach the mob, and the horses make a bolt up the gully, followed by the shouting stockmen, cracking away with their whips. The horses rush pell-mell

into the yard, and before they perceive that their old exit is closed, they find that their pursuers have shut up the opening by which they had entered. By this means large mobs of horses are often caught.

Perhaps one of the most successful methods of getting rid of them is that of shooting them with



SHOOTING WILD HORSES.

a rifle, and this is specially practicable in rough or mountainous country, when other means would fail. On one station, in such a district, five hundred have been shot in one year! The horse in this wild state is extremely cautious and wary,

and therefore affords most excellent sport, by whatever means he is proceeded against. Stalking affords much excitement, and frequently becomes extremely difficult, as the mob are apt to feed in very scattered order. The stalker, after much patient and persevering creeping from rock to tree, and from tree to rock, at last manages to get nearly within range. Cautiously and quietly he prepares his rifle, when suddenly his rear is turned by a previously unnoticed member of the mob, which immediately vanishes, and he is promptly then left alone, with all his wearying toil unrewarded. Driving may often be resorted to with great success.

Those economically inclined, will cut off the mane and tail to swell their bale of horsehair, which is worth per pound quite as much as wool. No other parts are worth removing, until indeed Australians have learnt to feed on horse "venison."

Colonial saddles have huge knee-pads and a peculiarly formed seat, both of which are great helps to sitting the twirlings, proppings, and other sudden and eccentric motions of a stock-horse.

All Australians ride from their earliest years,

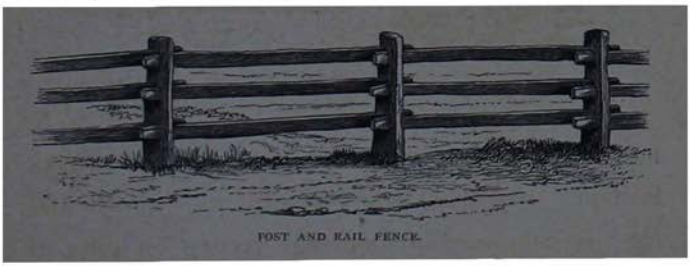
and hardly understand other means of locomotion. Often will they take immense trouble to walk after, catch, and saddle a horse, to ride but a distance equal to that they have trudged in search of him.

CHAPTER XXII.

FENCING AND CLEARING.

POST AND RAIL.—CHOCK AND LOG.—WIRE FENCING.—BARK.—CLEARING STUMPS.—WANT OF GRASS.—VARIETIES OF GUMS.—SWAMP OAKS.—COUCH GRASS.

THERE are various works carried on up in the bush whereby nature is aided; such works are done by "bushmen," who are ready for any odd job during slack times, and then make their pile at shearing-time.



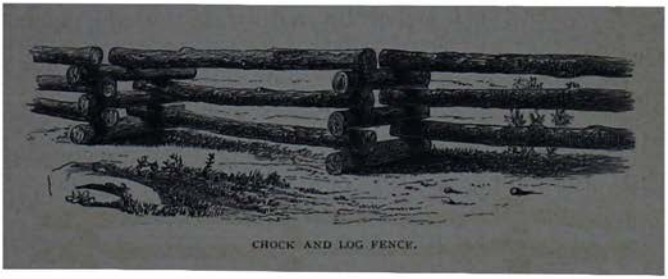
POST AND RAIL FENCE.

Fencing is one of the most important of these works. That species most common is the "post and rail," which exists everywhere; as in the suburbs of Sydney, so in the almost trackless wilds of the

interior. Slabs, either split or sawn, are let into the ground, and, through morticed oblongs in them, lie rails, being other slabs; sometimes but two rails are seen, whereas often there are more rails nearer the ground, to render the fence sheep proof.

The slabs for rails are universally cut nine feet in length; hence two panels go to one rod, and the fencing is thus easily measured, and usually paid for by distance.

For short fences, round sheep-yards, &c., a rougher style is affected. In one sort logs are



CHOCK AND LOG FENCE.

notched at either end, and then laid in zigzag fashion. Another fence, known as "chock and log," is composed of long logs resting on piles of chocks, or short blocks of wood.

A very common fence, in use more especially round sheep-yards, is built by felling trees round the space to be enclosed, and then, with their stems as

a foundation, working up, with the branches, a fence of a desirable height.

For sheep, too, is made the "basket fence." Stakes are driven in, and then pliant "stuff" interwoven, as in a stake hedge in England; however, this fence is particularly liable to get burnt down.

Wire-fencing is coming into very general use, particularly in countries where wood is at all scarce. When first put up in a district, unless there be a top rail of wood, it is very liable to be smashed by cattle and horses, as it is nearly invisible.

Bark, as a material for roofing, has already been noticed. It can only be taken off live trees, but comes off readily. A short distance from the ground the bark is cut through, right round the stem, which operation is repeated some ten feet higher up. A perpendicular cut is then made down the stem, and the bark peels off all round the tree. The "sheet" is laid on the ground, with its rough side uppermost, and gradually becomes flat. In a few days it is ready for use, and is carted into the head station, whether for immediate use or for stacking. Thus stripping trees of their bark is certain to kill them, and one often comes on fine tall, straight, stringy-bark gum-trees standing dead in the bush; so much

valuable timber lost. The best sheets of bark are procurable from the best timber stems.

Another great work carried on is the clearing the land of trees. This is accomplished by first killing the trees, and then carting away their remains.

For the first operation the usual method adopted is to stop the circulation of the sap by "ringing," or taking off a small strip of bark all round. Soon after being thus treated the tree dies, and probably falls.

The great labour, however, is the clearing away logs and stumps: fire is the great agent employed for logs and branches; but the stumps are uncommonly troublesome.

Some heave them up with huge levers after heavy rain; others strive to rot them with acids; others again endeavour to render them highly inflammable by saturation with kerosene, or other oil.

The efficient performance of these several labours is most essential to the well-being of stations.

Grass is often so closely eaten down that it would seem to have but little chance of continued propagation by seed. It might be worth while to reserve patches of grass now and then, on which to allow of the growth of seed. At present it

seems marvellous that any grass should remain, considering the ravages of animals, of sun, and of fire. There can be very few plants left for supplying the necessary seed for future generations. In Australia there is often a severe dearth of grass, and one would imagine that even a small sum invested in seed could not be without very beneficial results on any station.

Near the head station it is a very good plan to have two paddocks, and use them alternately, and thus both horses and milch-cows get much better feed at no extra expense.

Gum-trees of various species afford the chief supply of wood throughout Australia, and are specially adapted to the wants of the settlers. "Blue gum" and "stringy bark" afford very good building timber, and the bark of the latter, as already mentioned, makes a capital roofing. The wood of the "iron bark" is perhaps as durable as any timber in the world. The "apple-tree," another species of gum, is often to be seen afflicted with a huge swelling, from which, on being cut, copiously exudes a yellowish brown liquid of very astringent properties, sufficiently so for the tanning of skins.

The several different gum-trees thrive in various soils, and are more or less peculiar to certain styles of country. Thus it is that an experienced hand is able to pick the best virgin country, no matter what the season in which he visit it,—even supposing the grass has all disappeared after long droughts. By the species of tree he will be able to discover where grass most abounds in favourable seasons.

It is only near the coast that gum-trees grow to any size; there they attain an altitude of three hundred feet. Further inland fine trees are rarely to be seen, save in the beds of rivers and other low lands where there exists a plentiful and never-failing supply of water.

The beds of creeks and rivers are usually more or less filled with "swamp oaks," a species of casuarina somewhat resembling in form and colour the common fir. These and tall gums bear high in air evidence of the enormous floods which occur from time to time; débris is collected in the branches of the trees at an almost incredible height.

Near the coasts gigantic fig-trees thrive; and in certain places cedars occur in goodly numbers, and are of great service for cabinet work.

The native grasses are plentiful and good; and there are likewise several imported plants spreading fast. Of the latter, perhaps one of the most curious is that known as "couch" grass; it thrives especially on poor sandy ridges, and is supposed to have been originally accidentally brought from India attached to some sacking. It is the durva or daub grass of the Hindoos, and is peculiarly nutritious, and a great favourite with both sheep and cattle.

Lucerne grows luxuriantly in certain prepared lands, and makes very good hay.

Of course in the more unsettled parts, where squatters exist, little or nothing is done towards laying down good grass; all is left to nature, which is perhaps the most profitable course under existing circumstances.

CHAPTER XXIII.

WINE, SUGAR, AND FEATHERS.

WINE HOUSES.—SUPPLY OF SHIPS.—SUGAR.—COCHINEAL.—COFFEE —SILK.—OSTRICH FARMING.—YOUNG BIRDS.—MANAGEMENT.— POINTS OF FEATHERS.—EIGHTY PER CENT. PROFIT.

THERE are various industries more or less common up country in the several colonies, foremost among which stands the production of wine.

Climate and soil are all that can be desired, and it therefore depends entirely on man to render wine a source of future prosperity to the Australian world.

The proper drink of a country, of the climate and soil of Australia, is a light wine, which should be saleable at about twopence or threepence per half-pint. It therefore behoves wine *growers* to supply their own country with such a wine; and, besides, to supply choice vintages to certain "wine houses." More than this the growers them-

selves ought not to attempt. At present some of them try to make a great name by exporting wines, and disappointing failure has constantly been the result. The reason of this is simple enough; one cannot be sure of two bottles being alike, even though each cost five shillings!

The remedy for this might be found in the establishment, in Sydney, Melbourne, and Adelaide, of first-rate "wine houses," whose sole business it should be to buy up whole vintages in bulk, out of which to keep up certain standards of wine, which should always be the same. Thus the outside world would gain confidence in Australian wines.

It is simply through the agency of such houses that port and sherry exist. At Oporto and Cadiz several large English firms are settled. They buy up the produce of certain vineyards and species of grape, and out of them make a wine of always the same standard.

It will be a great object gained when Australia can supply the market with a dependable wine. Russia, England, and the United States are great markets for any good wine; and the numerous passenger vessels trading to Australia might well

be supplied for the voyage in Sydney or Melbourne, instead of being stored with wines from Europe.

Champagne, rapidly becoming an essential medicine, is a species of wine that would do well in Australia. Its manufacture, however, requires a large capital, though the returns are large. In the "brewing" of this wine, fermentation is not allowed to become perfect,—the wine at a certain point of the fermenting process being corked up in bottles. These bottles have to be stowed in cellars, and kept at a very equable temperature, or they will surely burst. In some of the great wine-cellars of Champagne the bottles are ingeniously racked, so that one bursting does no injury to its neighbours.

Unluckily the *Oïdium Tuckerii* has already made its appearance in Australia; but a plentiful powdering with flowers of sulphur appears to be a pretty sure antidote.

Very good wine is already made in Australia, but by far the greater proportion is taken too little care of; and again, it is drunk as if it were a strong brandied wine (as port or sherry), in small glasses, and at about the same price. Whereas it is evident

that the want of the country is a light wine, of similar strength and price to beer.

There are several vegetable products, which doubtless eventually will be much encouraged in the Australias.

Sugar has already obtained a considerable footing along the sea-coast—where both climate and soil appear to be uncommonly favourable. As with all other works, want of labour is the chief obstruction. Some of the rivers to the north of New South Wales and in the south of Queensland appear all that can be desired; inasmuch as they afford magnificent ground for the cane on their banks, and plenty of water close by for the transport of the cane, whether raw or crushed.

Lately a species of coccus has alarmed all sugar-growers by its sudden appearance: but it has since been pointed out that this little insect, which so disturbed the minds of the planters, belongs to the cochineal family, and in itself represents the production of an important dye. It is proposed to allure it off the sugar-cane by planting, as break-winds, hedges of the *Opuntia cochinillifera*, a species of cactus, upon which the coccus would feed and thrive; leaving the sugar to reach per-

fection, and affording in itself a fresh source of profit to the planter.

It may here be noticed that from the Canary Isles, in 1831, four kilogrammes of cochineal insect were exported; but such was the increase, and therefore paying nature, of the industry, that twenty years later, that is to say in the year 1850, the Canaries exported no less than four hundred thousand kilogrammes. In most parts of the world, where the climate is favourable, cochineal is produced, save in Australia, where doubtless, ere many years are over, it will figure largely among the other exports.

Ever and again stir is made concerning the production of sugar from beet-root, and doubtless such work would pay, could a large supply of water be invariably at command; otherwise it would seem that the frequent droughts must necessarily retard the proper expanse of so large a root.

Sugar, with its attendant climate, brings us to the subject of cotton and of coffee. A man intending to go in for coffee-planting will do well to get a year's experience in some well-known coffee grounds—in Ceylon, for instance. He could then proceed to the warmer part of Australia, and would

very probably find most excellent land for his purpose at a mere nominal cost, with no competition. He must, however, trust entirely to his own knowledge and experience; and this he might have gained at very little outlay in some regular coffee-growing country. Men with small capital must combine. The more invested, the greater are the profits. It is a great gain in the colonies to be able to arrive there and start some new industry on one's own experience and knowledge; small capital in money will then go a very long way. But the experience, the knowledge and the power of work, must all be thoroughly good and reliable.

Australia appears well adapted for the growth of silk; and no doubt as her children increase so will they seek new industries wherefrom to gain a living. The first desirable move towards the production of silk is the immediate planting of mulberry orchards, in order that there may be a plentiful supply of food ready for the worms when they shall arrive.

There are many branches in the trade of producing silk. The supply of mulberry leaves alone forms in itself a trade. Then there is the breeding of eggs, a department in which California excels; and

then there is the taking the silk from the cocoons, which necessitates a certain amount of machinery, as well as a large amount of skilled labour.

A new industry is always welcome in a new country; yet, few seem to have even thought of the idea of ostrich farming. In Australia we find an analogous bird, the Emeu, thriving in the wild state; it is therefore to be supposed that the climate and country are essentially favourable for the purpose. The demand for ostrich feathers has been supplied hitherto by plumes procured from the interior of Africa, from the natives who get those feathers from the wild birds. The consequence of this heavy demand has been that the wild ostrich has become uncommonly scarce, and unless cultivation be resorted to, it will, in all probability, join the Moa as a thing of the past. In a country of the social and natural conditions of Australia the production of ostrich feathers would flourish well. As with sheep, there would be two branches to the industry. Wool would be represented by feathers, and there would be the breeding for stock purposes.

The paying nature of the concern when tried in Africa has been amply proved. Take an instance by chance:—A farmer in this new branch

of the art has made a profit of 80 per cent. on his "first crop," which was taken before the few birds he had, had reached maturity. A short *résumé* of their management may not prove entirely uninteresting.

To commence with the young birds. They must be taken great care of whilst only covered with their first stubbly down, and on no account must they be allowed to get wet, or they will surely die. They thrive well on lucerne, and are very partial to Indian corn. As they grow they may be turned out into the paddocks, where they will dine off strong weeds and any plants left for them. One great point, during their whole lives, is to give them free access to plenty of gravel, or in default of this to bones more or less smashed and broken up. Before reaching their first year they give their first crop of feathers, and at about three or four years old they begin to lay. Both cocks and hens look after the eggs, and are at this season often inclined to viciousness, so had better be left to themselves. They lay enormous numbers of eggs, though they only hatch a portion; and if their rapid increase is desirable, the young, at a very early age, may be skilfully taken from the mother and reared by hand.

Thus two or three families may be reared in one season, and a flock will increase fast.

Ostriches must above all be kept carefully from access to any small objects, as they are notoriously addicted to picking up anything,—from ducklings to copper coins and newspapers. Moreover, when dead their stomachs should be examined for any lost articles. The chief product is their feathers. These are taken from the wings, and African prices actually vary from three to twelve guineas per pound, each containing say eighty feathers on the average. One bird, at a crop, produces about a dozen marketable feathers, whose quality differs considerably, as may be inferred from the enormous variation in price. The "points" of a good feather are great thinness of quill, with length and delicacy of plume.

Ostriches may likewise be turned to other uses. They are quite strong enough to form "mounts," and their speed for short distances is very great. Each egg affords some 3 lbs. of wholesome food, though opinions are divided as to its palatableness. The eggs not hatched by the hen might thus turn out useful, or might be hatched artificially. The shell itself, surrounded with netting, forms a ready sub-

stitute for crockery and baskets, and, moreover, could find some sort of market if transferred to Europe. Such are a few bare details of a new species of farming, which will probably soon come into general existence in South Africa, and is at the same time an industry which should thrive well in Australia.

CHAPTER XXIV.

FLAX AND MEAT.

PHORMIUM TENAX.—EQUAL TO GREEN HIDE.—CULTIVATION OF THE PLANT.—HOPS.—SUPPLY OF MEAT.—CONDITION OF ANIMALS BEFORE SLAUGHTER.—ICED MEAT.—MEAT BOXES *v.* BEEF CASKS.—ADIPOCERE.—DEAD SHEEP.

TURNING to New Zealand, we find a wonderful indigenous production in the "Native Flax." The *Phormium tenax* is found very commonly, growing thick wherever water is. It has the appearance of a cross between the aloe and the flag, and grows to a great height.

Though its full capabilities have not as yet been adequately tested, its fibre has certainly two great advantages for rope-making and such purposes: extreme length, on occasion reaching thirteen feet, and very great strength. It is already exported to England in large quantities, although it does not appear as yet to have acquired special fame.

In the older days of the colony it formed an article of trade from the Maori to the white man.

In 1831 its export had reached the respectable amount of 1,062 tons; but a few years afterwards it had disappeared altogether from the list of exports. In those days the fibre was prepared by the Maories by a slow and tedious process, the long broad leaf having to be scraped with mussel shells until all useless pulp was got rid of. For several years money and brains have been lavished on attempts to devise some satisfactory way of preparing the fibre for the market; and it is only within the last few years that any remunerative method has been found. And now its exportation is assuming vast proportions.

The destruction by fire of one or two vessels from New Zealand has laid the charge on flax of being a very dangerous cargo; but it would seem that on strict inquiry the origin of these fires could never be traced to the flax. It is well known that almost any material is liable to spontaneous heating, more especially if it be at all damp. Wool, cotton, or fibre have all the same tendencies. To give flax a good name, every individual shipper should take the most vigorous care to ensure his shipment being perfectly dry before it enter the hold.

Flax is very common in most parts of New

Zealand, and is of great use in various ways; its long leaves, when fresh, forming a ready-to-hand and adequate substitute for leather, rope, or twine. The leaves are easily splittable into any width from five or six inches to the thinness of a thread. Serviceable hobbles, stirrup leathers, saddle straps, and other many portions of harness are readily made of it. In fact, when travelling *à cheval*, almost any breakdown can be remedied by it, even to the putting a lanyard to the hat, or sewing up a rip in coat or trousers.

Of course its chief strength is while fresh, and after the green colour has departed the tie or strap will soon not be worth much.

For exportation the fibre alone is retained, and this being properly dressed, no longer possesses the tendency to decay.

In some places are to be seen vast belts of flax growing in the beds of watercourses, winding over plains or up valleys; and nowadays one sees occasionally in the midst of these, three or four small buildings in one of which works an engine, cleaning the fibre. And the flax, as it is cut, can almost be pitched into the engine-room.

Hitherto the exports have only been from wild

flax, but now people are beginning to think about cultivating the plant, and none too soon, inasmuch as the young plants require time to attain proper size; and thus the trade will not suddenly come to an end, as it infallibly would do, did people continue to work up all available flax, utterly ignoring an inevitable dearth in future years.

Flax is to the New Zealander just what green hide is to the Australian; indeed, it is a veritable "poor man's friend."

Hops are greatly grown in New Zealand and Tasmania, and in both countries are invaluable in the manufacture of capital beer. They would, moreover, find a ready market for the interior of Australia, where sugar-beer is greatly made, and used as a general drink on many stations, yet only obtained by the help of hops brought all the way from England.

Australia is peculiarly adapted to the growth of meat, but meat is of course both producible and produced in far greater quantities than can be devoured in the country, even for a few thousand years to come.

In some parts of crowded Europe there is almost a dearth of animal food. Hence arises the question,

How is Australia's surplus to supply the wants of Europe? Of late years endless plans have been adopted, with more or less success, of sending this meat to Europe; but then preserved meat does but slowly work its way into the confidence and liking of the poorer classes.

Various methods have been adopted—salting, preserving, and sending home fresh.

What appears to be the great secret of success in preserving meat, oftentimes obtains apparently but little consideration at the hands of those most interested. The state of the meat before killing is too seldom considered, though on its then condition depends, in a great measure, the favourable result of the undertaking.

Animals eat in order to obtain from food a certain amount of chemical substances to supply the loss occasioned by the waste and wear of life.

If the supply of food be inadequate, and waste and wear gain the upper hand, a partial state of decomposition is the result. Therefore, beasts before being killed should have been for some time fed abundantly.

Again, beasts should be thus well-fed until some twelve hours before being killed—and these last

hours should then be passed by them in *peaceful repose*, but without food. When killed they should be bled thoroughly. This should be done in order that the whole carcase consist of thoroughly formed flesh. It should have entirely absorbed all nutriment contained in the food, but should not have turned the corner towards decomposition.

In Australia, beasts for the butcher are often travelled hundreds of miles; after which they are kept for some days in perpetual excitement, driven and hunted from yard to yard by dogs and men, and are then killed in the worst possible state. For, if the beast be excited, both flesh and fat are in a peculiar condition, essentially unfavourable to their well preserving.

In a word, all meat preservers should be particularly careful that the meat be in a thoroughly sound state before being killed; that is to say, the wear and tear of life should be exactly compensated by the amount of food already received into the system, not merely into the stomach.

Of the various ways of preserving meat, with few exceptions it may be said that in each some peculiar property of the fresh meat is lost.

Salt abstracts all albumen and other bases, unless

the meat be really properly killed, and then it is too firm and solid to yield to such action, and, moreover, the fat absorbs the salt.

Salt and water act very powerfully in the abstraction of potash, phosphoric acid, and albumen from the meat; and it is the absence of these important ingredients that causes scurvy.

Again, beef-tea and other extracts abstract a vast amount of nutriment from the meat, and are excessively easy of digestion, but they lose all the valuable benefits of fibrine, albumen, and fat.

In theory, the best plan of preserving meat would be that of keeping it fresh, and this plan should be perfectly feasible by the agency of extreme cold.

An example may be seen in the ice-room of the P. and O. steamers, which have all their meat killed in Southampton to last to Alexandria, a passage of thirteen days. If such a plan is in daily use for thirteen days, surely not long hence the same theory will be rendered practically available for a longer time.

This plan of bringing home the carcase would appear to be the inevitable solution of the difficulty, inasmuch as none of the qualities of the meat are lost.

There are several places ready to compete with Australia in the supply of meat to Europe—notably South America, which has the great advantage of being so much nearer; and this fact may possibly some day even enable her to send home, profitably, live stock.

Certain it is that, as nations increase, so must there be a continuously increasing demand for animal food.

Of one great branch at least Australia might well monopolize the supply; namely, the shipping. Let South America furnish Europe with live stock, whilst Australia fills the ice-rooms of every ship that crosses the sea. And thus in a few years let us hope that, instead of taking on board so many barrels of scurvy-giving salt-pork and salt-beef, all vessels will naturally ship an equal amount of Australian meat-boxes, containing good meat, preserved fresh by cold alone. On whatever plan meat be preserved, the fact must never be ignored, that, at all events for the English market, only that meat which has been killed in really prime condition will ever meet with ready sale.

Through various causes,—floods, droughts, and snow,—large numbers of animals are occasionally

destroyed in Australia and New Zealand, to the great loss of the squatter.

It would seem at all events well worth the trouble for him, in such an event, to strive to obtain from the carcases that valuable substance known as adipocere.

As its name implies, it is "fat wax," of somewhat the same nature as spermaceti; and in appearance like common white cheese. It is of great commercial value.

It was first noticed when some vast burial-pits in Paris were opened, with a view to their removal.

This curious substance appears to be formed during the decay of flesh—the most favourable conditions under which the formation takes place being, when the carcases are laid touching each other in some damp place, more especially in running water, and free from the action of the atmosphere.

New Zealand would appear specially suited for its production: sheep in the higher land occasionally get destroyed in large numbers, either by snow, or by rushing headlong, during mustering time into deep gullies and pits, and so smothering one

another. From these carcases, if properly treated, adipocere might be obtained in goodly quantities.

Usually only a few lumps of this valuable substance are found on one carcase; though a corpse has been discovered which was entirely converted into one mass of adipocere, thereby doing away with the assertion that it was but the fat of the body.

Therefore, in the event of an accident to a number of sheep or beasts, let the carcases be all placed together out of the air, either under water or buried in damp earth, and thus an accident to a flock may be rendered more productive than its escape therefrom, seeing that adipocere is worth a good sum per pound.

DIVISION IV.

MINERAL WEALTH.

CHAPTER XXV.

GOLD.

GOLD IN ITS PRIMÆVAL ENVELOPE.—GOLD OUT OF IT.—QUARTZ MINING.—ALLUVIAL DIGGING.—WASH-DIRT.—PROSPECTING.—NUGGETS.—SPREES.—POOR MAN'S DIGGINGS.—GROG SHANTIES.

IN common with other countries, the Australias are very rich in minerals of various sorts. That portion of the earth's crust which has there been explored, proves well stored with most that man could desire or expect therefrom. For domestic purposes, building stone, lime, coal, &c. are found in great profusion.

But the greatest want of a new country is population, and an invaluable agent in the supply of this want is gold, inasmuch as it acts with more than magnetic attraction on individuals, even on the other side of the globe.

Now this valuable metal has been found almost wherever it has been looked for over the Big Island, and it also crops up in great abundance in New Zealand.

Gold is found in granitic, silurian, mesosoic, and miocene formations, though in such limited quantities as to render its working but rarely remunerative. The matrix in which it occurs at all abundantly is quartz, that curious siliceous substance which appears at one time to have invaded and occupied all available fissures and cracks in the earlier rocks.

To the great denuding powers,—sun, wind, frost, and rain,—quartz has yielded up its wealth from time to time. Thus it comes to pass that man in his search after the yellow metal enters upon two methods; the one of extracting it out of its primæval envelope, and the other of picking it up when ready freed for him by nature's own agencies.

The first of these two systems is the "Quartz Mining," whereby the quartz, after being brought to grass in a more or less broken state, is either crushed to powder, and the gold thence extracted, or it is placed in a state of high fusion, and its greater specific gravity causes the gold to sink to the bottom.

The second method gives rise to alluvial diggings, when men grope about in the soil to find the metal free and by itself.

Quartz mining is usually carried on by companies,

and requires large establishments and much machinery; and thus a regularly arranged manufactory is set to work on a quartz reef. In Australia this requires much capital; whereas in the Tyrol, owing to cheap labour and interested labourers, aided greatly by the magnificent water-power which nature provides, ore is blasted, raised, stamped, and amalgamated with mercury—profitably, though with a result of but a tenth of an ounce to the ton; (in Australia the minimum remunerative percentage is usually considered two ounces to the ton;) these gains, though so minute, yet amply repay all interested in the concern.

In Australia already marvellous depths are being reached by the quartz miners, and it is found that the supply of gold is virtually inexhaustible, for as far as mines penetrate there they find quartz "reefs" which are gold-bearing. This method of course is regular mining, and has no resemblance to the "gold digging" which was so much in vogue after the first finding of gold.

Alluvial diggings, on the other hand, take their rise from some quartz reefs having been more or less broken up by nature, and the gold contained in them having been washed away by water. The

metal being, however, of great weight, speedily finds the bottom of the watercourse, and is gradually embedded there with other débris; the water retires, and leaves alluvial flats overlying the "wash-dirt," or first débris of the stream. This "dirt" contains all the heavier portions of the deposit, as stones and gold, and it all rests on the "bed-rock," through which the metal is unable to sink.

In some places, such as the Rocky River in New South Wales, basaltic lava, or other volcanic substances, have flooded over such alluvial deposits, and thus necessitated either sinking through the hardened crust, or tunnelling under it from the side of a hill or other favourable position.

It is on alluvial gold-fields that the veritable digger is to be found.

The methods of working alluvial deposits differ with the various soils and the depth at which exists the "wash-dirt." This latter has first to be got at, then more or less loosened, and finally washed and shaken in water—the gold sinking to the bottom of the pan.

Sometimes the removal of a small layer of soil brings the digger immediately to the "dirt," and then his task is easy. At other times he has to make

sinkings, or large wells of greater or less depth; and frequently has to tunnel, and so approach more to real mining. When the wash-dirt lies at a considerable depth, of course the work becomes more laborious and expensive, as it has all to be raised to the surface before it can be washed. The usual sinkings very much resemble graves; the object of the digger is to arrive at the wash-dirt with as little trouble as possible, and then to see if it be likely to hold much gold. The long grave-shaped hole is the one he can work in best, inasmuch as he can use his pick freely—first at one end, then at the other.

"Prospecting" is the term used for the work of searching for gold-bearing "dirt." In most districts where gold has not yet been worked, Government offers rewards of several hundred pounds to the discoverer of deposits of gold in sufficient quantity to render its working remunerative. A little knowledge of geology, more especially of that branch which inquires into the effects of denudation by sun, frost, rain, &c., is of great use in this work. Thus a quartz reef may be discovered which terminates abruptly on the evident course of some ancient flood of waters. The bed of the old torrent is inspected. The idea to be kept in mind is that that whole deposit was at one

time liquid, that heavy particles of gold were washed about, and the more heavy among them would have found the bottom at the very first, while the lighter particles would have been washed further. By following up ledges of rock and other features, one pitches upon the most likely holes in which the imaginary stream would have deposited its heavy freight. Here a sinking is made till the bed-rock is reached, and here should lie the heaviest nuggets. As before mentioned, some of these deposits are close to the surface, and then, if they contain much gold, of course the yield is very heavy, in proportion to the labour required.

One man, while lustily breaking up with his pick the stiff soil about the roots of a tree, brought it down on something so unusually hard that the handle broke, giving a severe jar to his arms. He of course used digger language, but nevertheless proceeded to examine the lump of rock, when, lo and behold! it turned out a nugget, which eventually sold for £8,000.

In favourable places a mode is in use which not only saves the breaking of picks,—on occasions an immediate accident,—but is also more effectual and expeditious in clearing out gold from its most

favourite resorts, the roots of trees; and this is washing away the soil by means of a shoot of water of good force.

Gold-digging in Australia is a regular profession or trade; men will work on at it until they get a good "cheque," and then they are off into some large town for a "spree," which is usually put an end to by their waking up some fine morning in the lock-up, all their cash gone, and selves in a very desponding condition.

One very pernicious effect such a life has, in that it leads men to give up all steady employment, and to live on and on at the diggings on chance findings, hoping every day to pitch upon a good thumping nugget. In fact, it is a species of gambling; a man whilst digging never knows but that each successive pick may hit on the 8,000-pounder, and so he is kept on tension of excitement, and never led to attempt to save his smaller earnings, because of this perpetual expectation of a sudden fortune. Not only does such a mode of life, if pursued for any length of time, render him unfit for other employment, but when, at length, the welcome nugget is brought to grass, it is more than probable that it melts and vanishes in a few days' spree. The minority who

have done really well as *bonâ fide* diggers have had their luck at the very outset, and had not had their nature spoilt by small findings.

Chinamen make very successful work on "poor man's" diggings, *i.e.* places where can be obtained a tolerably steady and reliable supply of gold, though in very minute quantities. European diggers prefer the chance of a really good find, wherewith to have a spree, which, if not the ultimate aim, is usually the ultimate result of their labours.

The different gold-fields are presided over by a Government officer, who takes charge of the gold; keeping in safety that which has been obtained from the earth, and granting licences, allotments, &c., to the diggers for the procuring of that still beneath the surface.

At diggings, people who keep stores, and more particularly those who keep grog-shanties, are those who prosper, as into their hands all the lesser earnings of the diggers find their way. It is only a good run of luck which enables the digger, in place of the fighting and drinking at these shanties, to enjoy a more varied, though at the same time more extravagant spree, in some neighbouring town.

CHAPTER XXVI.

PRECIOUS STONES.

GEM DUST.—DIAMONDS.—IDENTIFICATION OF STONES.—HOW TO TELL A DIAMOND.

OF late years attention has been much called to the existence of precious stones in Australia; and diamonds have already been discovered in goodly numbers, all however of very puny size, few being of use for anything more valuable than "gem-dust," which, however, is worth some £100 an ounce, and is greatly in use for polishing larger stones.

Diamonds rise in value according to their size, at about the ratio of a square of their weight; the standard used being a carat, which equals 3·16 grains troy. They depend, moreover, in value on their colour and brilliancy, technically termed "water;" those of a pure "colourless colour" are said to be of the "first water."

It is sometimes remarked that though so extremely hard they can be readily cut with a pen-

knife: this merely arises from the fact of their being very liable to "cleavage," or capability of being split. Thanks to this peculiarity, should a large diamond be of small value owing to the presence of a flaw, lapidaries are often enabled to split it into two smaller stones of higher value, and thus eliminate the flaw.

When uncut, a diamond is surrounded by a crustation, in fact hardly exhibits any of the well-known characteristics of the "gem of light;" and thence, under the operation of being cut for setting, it necessarily loses a great portion of its weight, sometimes even more than half.

Diamond, being pure carbon, has its closest familiar resemblance in charcoal or coke; yet, though its chemical nature is thus well ascertained, the wonderful powers of science have hitherto never succeeded in producing diamonds of more than microscopical dimensions.

Of other precious stones numbers are found at the diggings and elsewhere; some of these do well for setting, though others can only be used as inferior gem-dust.

Any persons who chance to find themselves near streams flowing from or over rocky districts might

well devote a small amount of energy to searching in their beds for precious stones. Some would advocate fowls as first-rate diamond finders: they maintain that hens and chickens will wander about the beds of creeks pecking up all the brightest little stones they see, and then, when they are called upon to adorn the dinner table, the contents of their interiors are sifted, and should yield up stores of diamonds and rubies. A very small amount of knowledge will enable a man to distinguish one stone from another, even in the unpolished condition in which they are found.

Perhaps the most generally and easily applicable test of precious stones is relative hardness. Anyone living in a district where precious stones are occasionally picked up can readily identify them by means of colour and hardness. He should possess himself of a glass-cutter's diamond and small specimens (which can be procured cheap) of sapphire, topaz, and quartz, having sharp corners and also smooth surfaces; these four, being of very different degrees of hardness, can be employed as standards of comparison.

It is always clear that anything that can be scratched by quartz is of small value. The follow-

ing rough table may be of some use to help in the identification of such stones as may be met with :—

1. *Quartz*—White and various tints. Two pieces rubbed together in the dark emit phosphorescent light; scratched by

2. *Emerald*—Green; scratched by

3. *Topaz*—White, yellow, green, blue, pink; scratched by

4. *Sapphire*—Blue, green, black, red, yellow, brown, or white; scratched by

5. *Diamond.*

Should the stone to be tested be small, it may be stuck on the end of a piece of sealing-wax, and so rubbed on the surface of the test stones.

Often the mere rubbing away of the point of one stone produces dust exactly resembling a scratch on the other, and therefore the smooth surface should be cleaned, and minutely examined with a magnifying-glass, to see whether there be a scratch, or whether the point has given way.

One rather more elaborate way we may mention of testing a stone to prove its being a diamond. Place it in a platinum jar with some powdered fluor spar, together with a little oil of vitriol. Let the

vessel warm over a charcoal fire, and let there be a good draught to carry off the bad vapours that will rise. When they cease to form, let the whole stand till cool, and then the true diamond will be found as clean as put in; the false will be corroded by hydrofluoric acid.

The recent discovery of marvellous stores of diamonds at the Cape shows the value of being able to test stones, even if ever so roughly.

CHAPTER XXVII.

COPPER AND COAL.

SMELTING.—DIFFICULTY OF CARRIAGE.—TESTING ORES VERY VALUABLE.—THE DUCK'S-EGG DIAMOND.—COAL AT NEWCASTLE.—NATURAL COAL CELLARS.

VERY many different ores have been found in Australia, workings and mines for which appear in many districts; and doubtless they will abound more and more as the country becomes opened up.

The celebrity of the Peak Downs, Burra Burra, and other mines, will sufficiently vouch for the presence of copper in large quantities; and the smelting of this valuable metal is already being carried on.

The great drawback to working mines anywhere at all far from the sea-coast is the expense and difficulty of carriage; but this will some day be surmounted when the railway-engine has superseded the bullock-team.

For those taking up new country, and even squatting in rather out-of-the way districts, it would prove a very interesting occupation, and moreover might turn out highly advantageous, were they to go in for testing such ores as they may fall in with.

The apparatus for the purpose is very simple, and easily portable; and the manipulation required is readily learned. The blowpipe is the "weapon" usually made use of. The proper mode of using it is to be found in any work on chemistry. With its help ores are tested by means of charcoal or of borax. On a small block of the former the ore is brought under the action of a flame till the metal it contains is resolved into a small nodule; and the nature and appearance of this nodule proclaims the particular sort of metal. Different metals impart different tints to fused borax, and on this principle also the metal in an ore is readily identified.

Such are then the simple operations which show the presence of certain metals in any ores found; but they are powerless to indicate the relative richness of an ore, which can only be ascertained by assaying, the paraphernalia for which are by no means portable. Indeed, this operation is far better

left to professional assayers, who are to be found in the larger towns.

Many travelling with stock, and in other ways perambulating the bush, would have grand chances of pitching on veins of perhaps valuable metals, or they might pick up precious stones; and once able to test their real value, they would not encumber themselves with useless pieces of quartz.

Lately, near Tamworth, whilst searching a creek with laudable mineralogical curiosity, a gentleman discovered what he supposed to be a diamond the size of a duck's egg.

As quickly as possible he rushed off to the nearest town and placed it for safety in the bank, and, in the plenitude of his good fortune, presented the banker with a fine ruby which he had found at the same time.

The diamond was sealed up in a bag, and sent down to Sydney by the gold escort.

On the discovery of its arrival in Sydney, the steamboat company, which had conveyed the escort part of the way, put in a claim for extra freight on the inestimable value of this huge gem. Pending the settlement of this claim, the Government took charge of the bag, not allowing its seal to be broken.

Multitudes, nevertheless, were allowed to handle the monster gem—through the bag; and whilst in this invisible state a company was formed to purchase it from its finder. They paid him £500 in cash, and gave him certain of the shares of the company; each share representing a proportionate division of the price at which the diamond should eventually be sold.

These shares, which were offered at first at £10, in a day or two rose to £80 each. At last, whilst legally investigating the demands of the steamboat company, it was considered advisable to inspect the diamond, and the Professors of the University were invited to be present. The seal was broken, and the diamond resolved itself into a water-worn lump of quartz.

The foregoing hints are thrown out to give some sort of an idea of what may be done by following up the more detailed advice contained in various handbooks for the use of mineral explorers and others.

Coal is found in many parts of Australia and New Zealand, yet is but little worked excepting at Newcastle, a good port at the mouth of the Hunter river, a short distance north of Sydney. In the immediate neighbourhood of this town there are extensive coal-

fields, obligingly near the wharves, alongside of which ships of any tonnage may lie. Coal has thus only to be conveyed a mile or so direct from the pit's mouth to the ship; and already a large trade is in existence, not only with the neighbouring colonies, but even with California and China.

Newcastle possesses a fine harbour, and, though its mouth is narrow, immediately within the anchorage is safe.

For some miles up the spreading lake-like river, the shores, both of the mainland and of the numerous islands, are covered with vineyards and small farms, whose produce is usually brought up to market by boats; by which conveyance too many inhabitants come to church on Sunday.

Just within the "market wharf" is a small dock called the "boat-harbour," where boats are left in safety whilst their cargoes are being sold in the market.

No doubt but that as carriage up country becomes cheaper, coal will be found worth the carriage from other places besides Newcastle.

In several parts of New Zealand there exists coal, but often it is in places at present virtually inaccessible to all ordinary means of conveyance.

On some stations it is so obligingly handy as even to be accessible as fuel. Nature kindly gives the squatter a coal-cellar perpetually supplied in the gully at the back of his house. In short, the Australian quarter of the globe is blessed with a never-failing supply, and at the same time extensive assortment of mineral wealth sufficient for the demands of ages to come.

DIVISION V.

NATURAL HISTORY.

CHAPTER XXVIII.

GENERAL VIEW.

MARSUPIALS. — THEIR PECULIARITIES. — ANOTHER EDITION OF MAMMALS.—REARING BIRDS AND REPTILES.—ENORMOUS ANTIQUITY OF THEIR REMAINS. — INTRODUCED ANIMALS. — NO VULTURES.—ZOOLOGICAL GARDENS.

REPRESENTATIVES of the same species of living beings are found in all districts of the world, with the exception of Australia and New Zealand; and of these two groups of islands, separated from one another by only a thousand miles of sea, each possesses a peculiar individuality of inhabitants.

In Australia is found that in so many ways remarkable family, the Marsupials; their most prominent peculiarity being that the young are carried in a pouch or pocket formed in the skin of the mother, and supported by two bones which exist in no other animals, save in the Monotremata where the bones exist without the pouch.

The Marsupials and the Monotremes form two

of the three classes into which Mammals have lately been divided. The distinguishing character kept in view in this division is the mode of producing young. Thus the Marsupials occupy the division Didelphia, whilst the Platypus and Echidna are the only two representatives of the Ornithodelphia division, at present known to science.

The Marsupials form, as it were, a second edition of Mammals, with a most peculiar method of bearing young; moreover, many of its members possess a mode of progression by hopping on two legs at once, unknown in any other family.

The Carnivora have their representatives in the Dasyures, or native cats, and Thylacine, or Tasmanian tiger; and it is, moreover, an interesting fact that not only are there representatives of each species, but that these representatives distribute themselves through all sizes.

Thus the native cat is found the size of a weasel, whereas the Thylacine, or Tasmanian tiger, has a body larger than that of a good-sized dog.

Again, the Grass-eaters, one might almost say Ruminantia, are represented by kangaroos, varying in size from the "old man" of six feet in

height, to the pretty little kangaroo mice, scarce visible.

Of Leaf-eaters, and inhabitants of trees, we find the "native bears," considerably larger than a good-sized cat; there are 'possums of every size, from those as large as a cat, to miniature specimens no bigger than a common mouse. Of the 'possums several species fly; that is to say, "shoot" across the air from tree to tree, by means of stretches of skin on each side connecting the front legs with the hind legs.

In the wombat we have a good specimen of a rodent, and in the bandicoot we see the representative of insectivorous animals.

The Monotremata, possessing marsupial bones, present us with two remarkable types of Edentata, that is to say, of animals that have no front teeth; merely organs of mastication in the back parts of the mouth, like birds.

The fossil Diprotodon proves the previous existence in Australia of Marsupials, much resembling the Pachyderms existing at the present time.

It has been remarked that in Marsupials there exists a lower type of organization than in other Mammifers.

The blood is returned to the heart by two principal veins, as in birds and reptiles.

The brain is of a lower and different construction, and in the number of their teeth we find another mark of their inferiority to other Mammals. Again, many of their bones present peculiarities in the same direction.

The young are produced in a very primary stage of development, and then, lifted by the mother's mouth to the pouch, they become attached to the teats, and there they remain till they have attained that degree of development at which other animals are born, and then they become disconnected from the teat, though they still continue to make use of the pouch in moments of danger and when travelling; and this, long after they have become of good size and thoroughly masters of their own actions.

The more recent remains in Australia point to the former existence there of several huge Marsupials; the skull of the Diprotodon, a large kangaroo, being three feet in length. Then existed also a wombat the size of a cow.

Fossil Marsupials have also been found in various parts of the world, the United States, Germany, &c.,

and lay claim to being of far greater antiquity than the remains of other known species of Mammalia.

Marsupial remains share, with the bones of other beasts, the more recent deposits as far back as the Pliocene, Miocene, and Eocene ages, beyond which no others have as yet been identified, save the remains of animals having marsupial characteristics, and these have been *in* Purbeck, Oolitic, and even Triassic beds.

In relation to theories concerning "Natural Selection," the family of Marsupials is of great interest. Its low organization places it midway between birds and reptiles on the one hand, and the Mammalia of the present day on the other. It has been probably proved to have existed on the earth ages upon ages before other Mammals; and at the present time its living representatives are only found in two parts of the world—we have the solitary instance of the 'possum in America, and the habitation by this curious family of that only portion of the world whither man has not swarmed, namely Australia.

The question arises, are Marsupials the next progressive development to birds and reptiles?

And has not the timely sending of convicts to Australia supplied man with the opportunity of

observing that more ancient form of Mammals, which probably in future years is to be entirely superseded by the present more common type? It would seem as though some very remote type of being had branched in two directions: that the older of these two branches, the Marsupial order, had been ousted from nearly all countries by the newer branch represented by the type of Mammals common at the present day.

Such animals as inhabit Australia, besides the Marsupials, all have the normal characteristics, but it is curious that their introduction can be easily accounted for. It must be remembered that Australia is connected with Asia by a series of islands separated only by narrow straits. Bats, birds, reptiles, and fishes, all represent the species of other continents. The two former classes fly, and can therefore easily journey from one continent to another. The Flying-fox is known to travel about from Australia, all up the islands, to India.

Concerning reptiles and fishes, not only do they swim, but they lay eggs, which are readily transportable in various ways. In the native dog, or dingo, we find however the sole representative of

ordinary land Mammals; but he may readily be supposed to have been introduced at some ancient date, from the Asiatic Islands, by the ancestors of the Dyaks, or other inhabitants of the seas to the north of Australia.

Another curious fact connected with Australia is the absence of the vulture tribe—of any large and voracious carrion-feeders. This fact is evidently owing to the absence of any large animals: there are no tribes of elephants, herds of hippopotami, &c.; only small mobs of kangaroos, which, at their largest, afford but a small amount of carcase.

A great boon to all Australia would be a central Zoological Gardens.

Not only could there be preserved therein the various types of native fauna which assuredly must in the course of time disappear, but the whole might be supplemented by a highly instructive collection of foreign animals.

Now would be the time to start such gardens, inasmuch as all native animals are common, and could be readily obtained, both to stock the gardens and to exchange for foreign beasts.

New settlers of all sorts would indeed be glad to learn all concerning the habits and appearance

of their future co-animals. Natives, too, would be able to compare types familiar to themselves with those of foreign parts.

The Zoological Gardens are well patronized in London: why should there not be an equally thriving institution of the same kind in Melbourne or Sydney? Moreover, the lions and tigers would help to devour some of Australia's surplus meat.

CHAPTER XXIX.

MOSQUITOS.

ALL OVER THE WORLD. — THEIR ATTACKS ON SPORTSMEN. — OBNOXIOUS BEDFELLOWS.—THEIR BUZZING AND ITS CURE.

WE now enter upon a more detailed account of individual inhabitants of Australia. Least in size, though by no means in importance, come the various insects which throng Australia.

And chief of them stands the mosquito, botherer of men in all extreme climes, whether hot or cold. At least thus one would argue from popular accounts of their attacks. Mosquitos-proper drive the proboscis into the flesh, suck out blood, and at the same time inject some species of poison, which causes the well-known irritation. Whether all "mosquito-bites" are caused by real mosquitos is quite another question. From personal experience, and from the records left by others, gnat-like insects throng the neighbourhood of water in all countries, and, besides inflicting irritable bites,

are greatly proficient at keeping up a buzzing solo, more especially during the night. These propensities and habits of such insects fully entitle them to the title of mosquito, whether their organization entitle them to it or no.

Northern countries are celebrated for the presence of these insects, right away to the verge of Arctic snow; but this celebrity is probably due to the fact that such places are only visited by English travellers in the bright weather and heat of summer. Moreover, a rough and semi-out-of-door life is lived, and their attacks are the more felt. I have slept two nights in a tent on the banks of the Thames during the heat of the summer, and each night the buzzing and biting was so incessant, that had I been a foreigner I should have asserted that mosquitos were the pest of England.

It is probable that the mosquito, to arrive at his full powers, requires much warmth. This in England only comes occasionally, and does not last very long. Norway, too, is suddenly and for a short period thoroughly warmed by a vigorous, though brief summer; hence the brevity of persecution in such climates.

The mosquito appears especially in conjunction

with warmth and moisture, and when these conditions are dominant his existence is encouraged and increased, so that the tribe is enabled to withstand even a certain amount of cold or dryness.

Australia can boast both of the virulence and multitude of her mosquitos; indeed, doubts have been entertained as to whether the American (who declared that to escape these pests he took refuge under a huge iron cauldron, and clinched their probosces as with their strength they drove them through, until at last so many had thus become fast that they flew away with the pot) did not, overcome by love of his own country, declare the incident to have happened in America, whereas in reality it must have taken place in the swamps of the Hunter River! Bathing in this same river is well enough, provided you remain altogether under water, for even whilst floating they vigorously attack every protruding particle of chin, cheek, or nose. (N.B.—Hold up your arm, or leg, till covered with mosquitos; then, by an energetic and sudden motion, you may have the extreme gratification of drowning a goodly number.)

Certain it is, that the mosquito is a vigorous

nuisance at most times, but more especially when out shooting.

In Australian scrubs there are hosts ever ready for the attack, even all through the day, and thus one is almost prevented from keeping still, whether to load or to obtain shots at brush wallaby, or other animals which are being "driven."

Whilst moving, these insects do not keep pace with a man; but directly he stops, his whole body, clothes, skin, gun and all, are covered with them, and their bites, which will even pierce his flannel shirt, are by no means conducive to that perfect stillness imperative in wallaby shooting.

However, man need not make a martyr of himself. He has but to cover his hands and wrists with good dogskin gloves, and allow a large veil to fall all round his hat, which to protect him properly from the sun will probably have a wide brim, and this will serve to keep the veil at a distance from his skin. Both veil and gloves are greatly objected to as inconvenient in shooting, but this objection soon disappears after using them for a short time. Moreover, putting aside even the question of comfort, it must be remembered that not only is one able, thus armoured, to stand perfectly still, and so to get more

shots; but face and hands, the two most conspicuous parts of white men in the bush, being thus completely hidden, the luckless kangaroo is unwarned of his danger.

Mosquito bites have various effects on various people, some hardly noticing them; but to all their buzzing at night is a source of immense discomfort and annoyance.

Mosquito curtains, which do not leak, are invaluable.

We all know that it is a very probable fact that no man ever has been, is, or will be, unless great changes take place, good-natured enough not to have some little angry passions rise on being waked up at night for nothing.

We all also very well know that nobody ought ever to be angry, and therefore everyone should make it an imperative duty to tuck in his or her mosquito curtains, after safely placing his or her body within them; then every mosquito within the said curtains should be placed *hors de combat;* otherwise, just as we are sinking into blissful oblivion, our ears are assailed by the high-pitched whizzing and buzzing of some hungry mosquito still within the net. We then sit up and furiously lash the interior of the

curtains with a large corner of the sheet. After violent exertions we sink on our pillow, hoping the insect has been utterly annihilated. But this same little beast has no more idea of being done out of his midnight meal than a good Moslem in his month of abstinence. And so the would-be slumberer is once more aroused by the buzzing, and violent slashing about is again resorted to; and so he will be tormented all night long by this one little pest, unless indeed he be lucky enough to tempt the insect to make a meal off one of his toes; for when gorged with blood the mosquito rests torpidly on the curtain, overcome by the same power as the Ceylonese anaconda after swallowing a bullock, namely the exigencies of digestion. However, as before hinted, a little care in time saves nine, or any other number, of times being waked up.

CHAPTER XXX.

OTHER INSECTS.

THE ACHIEVEMENTS OF CENTIPEDES.—TERMITES.—INSECT LIFE.—CONCERTS IN THE TREES.—BEES.—STINGING AND STINGLESS.—HONEY.—GRUB FOR FOOD.

THERE are several other poisonous insects in Australia, none of which, however, give any bother save in the attack itself; but then that one attack is generally considered quite sufficient for once in a way.

There are numerous centipedes supposed by all sorts of people to do all sorts of things: some would say they only sting like a hornet; others describe their walking over sleeping people, and leaving a long red tract never to be washed out; it is also maintained that they are able to deprive human beings of life in some mysterious, unknown, and inexplicable manner.

There are scorpions whose stings are proverbial. They are specially numerous on the tops of mountains, where they may be found under any stone,

but their presence is by no means so obnoxious as when they put in an appearance in dwelling-houses.

Termites have an Australian branch fully keeping up their name and character for the destruction of buildings; and their remarkable nests, mounds of earth six feet high, are to be seen frequently in certain parts of the bush.

As in most countries, so in Australia, there are vast numbers of ants: one, a large red variety, nearly an inch in length, and which goes by the name of the "red soldier," gives a very severe bite, and several other sorts follow his example.

Sit for half-an-hour in a summer-house in Australia, and one's time is fully occupied, first by the chase of a small lizard; then exterminating three or four mosquitos buzzing round one's head; then watching a duel between a huge ant and a long-legged spider; next squashing the life out of a centipede.

Doubtless all these insects would become rapidly exterminated, but for the fact that even a short residence in the country renders anyone marvellously callous to their presence, and therefore their slaughter is not zealously carried out.

To the "new arrival," after a long sea-voyage, more especially if he have never lived in hot climes, one of the most striking features of Australia is the constant whirring and chirping of the cicadas of various sorts.

It will often be observed that their noise sounds singularly like a species of concert. It will commence all suddenly, die away and cease entirely, but to commence afresh after a short pause. Again at times it will be kept up continuously; regularly rising and falling in force. The orchestra is usually located among trees.

Spiders appear on all hands, some of enormous size, which give a severe bite. One species makes for itself a really marvellous underground nest, with a well-constructed door, capable of being bolted on the inside. The quantity of webs one comes against in the bush is anything but agreeable.

Perhaps the most curious insect of Australia is (in a few years it will be was) the stingless bee; which has become well known owing to the fact that the blacks were in the habit of hunting it to its nest, in order to obtain the honey. This bee is, however, rapidly vanishing before the English stinging bee, which is fast spreading over the Island;

affording in all inhabited parts a liberal supply of honey.

Several species of gum-tree have a great inclination to become hollow, and in their stems bees delight to build.

The nest having been discovered, one or two men start from the station with a couple of buckets and an axe. The tree is felled, no matter what its size, and the honey transferred to the bucket; it is then taken to the station, and potted for the table.

Another inhabitant of the gum-trees is a huge white grub, or caterpillar, some three or four inches long. It bores about the stem, and is supposed by many to conduce greatly to the hollowness o gum-trees. Every here and there on the surface of the trunk it makes a small aperture, and by these it is traced, and cut out by the blacks, as food; for in it they find an abundant and nutritious dish. It has by no means a disagreeable flavour, once one's prejudices can be got over.

CHAPTER XXXI.

SNAKE-BITES.

ALLIGATORS.—GUANAS.—CONFUSION OF LOCAL NAMES.—CLASSES OF SNAKES.—POISON-FANGS.—POISON SWALLOWED.—CURE FOR SNAKE-BITES. — ANTIDOTES. — DIRECT INJECTIONS. — SIMPLE REMEDY ALONE APPLICABLE.

IN the Northern rivers thrive "alligators;" and everywhere are found lizards innumerable, from the gigantic 'guana,' some six or seven feet in length, which is often to be seen feeding on a dead carcase, to the tiniest and prettiest of little creatures darting about over logs and rocks, or basking in the blazing sun.

As for snakes, it is evident St. Patrick never visited Australia. They are common, and, some of their number, very poisonous.

It is utterly impossible to determine from report the true species, or genus, to which an Australian snake may belong, on account of the very conflicting evidence volunteered by everybody.

Take an example:—I have been assured by

people long resident in the country, that the difference between a "carpet-snake" and a "diamond-snake" is undiscernible, although one is poisonous and the other not. Now, according to Krefft, the great and reliable authority on the subject, both these above-mentioned snakes belong to the Pythonidæ, and positively do not possess the means of injecting poison, yet are of utterly different outward appearance. Moreover, he confines the diamond-snake (*Morelia Spilotes*) to certain localities, and this only after minute and careful investigation. Yet there are diamond-snakes (so-called) well known to exist in other localities. It is this frequency and variety of local names which creates so much confusion in Australia concerning snakes.

Many people believe themselves to be fully acquainted with the subject; but, from their adoption of merely local names, contradictions, otherwise unaccountable, arise.

When the poisonous powers of a snake are at all questioned, it is by far the safest course, practically, to grant it full powers; for it is only for those intimately and scientifically acquainted with the Ophidæ to determine in such a case. Various snakes are given to exercising their teeth, and in-

stances are often brought forward in support of the efficacy of certain remedies for snake-bites, when it is perfectly uncertain as to whether the biter were poisonous or not.

Snakes are divided into two classes—nocuous and innocuous.

The latter obtain their food by catching and then crushing to death their victim; the former by injecting poison.

The teeth of a snake are in no instance adapted to chewing or separating flesh. The jaws, head, and body are all marvellously formed to admit of a vast capacity for enlargement during the process of swallowing.

One use of the teeth is, in the venomous class, to inject poison into the blood; and in the non-venomous, to obtain a quick hold until the victim be encircled in the deadly folds of its captor.

The other use to which the teeth are put is to aid in the process of swallowing; and in this they render invaluable assistance, inasmuch as they retain all that is taken in at each gulp.

All venomous snakes are furnished, in the upper jaw, with two long teeth, known as fangs; through these they inject the poison. But some species of

harmless snakes have been found to possess one or two teeth longer than the rest, which may be readily mistaken for fangs; though, on closer inspection, they prove to be but half-formed teeth; flat, with a groove behind, round which they gradually close, and thus grow into perfect teeth.

The poison-fangs are fully formed teeth, with a canal up their centre, which connects a small aperture, just within the point, with a duct leading to the poison-gland, which consists of a small bag lying, in most instances, behind and under the eye.

Nature has placed behind the working fangs, several germs of new ones in every degree of development, to supply their place should they become broken or otherwise lost.

The fangs are kept in a recumbent position until required for use, and then they are "erected," if such a word can be used for teeth set up downwards.

The poison itself is entirely secreted by and in the gland above described; and hence it will be seen that a snake will, after a few bites, palpably exhaust his stock, and that, therefore, the bites will lose in intensity and power.

It is by no means unlikely that, by making use of this peculiarity, some snake-charmers and others

are enabled to allow themselves to be bitten. The stock becomes, however, replenished on the snake's being allowed respite from biting.

The poison, when fresh, is a yellow transparent fluid, something like saliva. It is neither an acid nor an alkali, has no smell, and on the tongue feels somewhat like grease.

When introduced *directly* into the blood, its effect is to destroy the irritability of the muscular fibre, and thus stop the action of the heart.

It is probable that, taken internally, it has no dangerous effects. Such has been the generally received opinion;—Celsus. wrote, "Nam venenum serpentis non gustu, sed in vulnere nocet." But certain persons have from time to time declared that doses of this poison have affected them, though in nothing like the same degree or manner to be expected from a direct infusion into the blood. And this would appear only natural; inasmuch as, though the stomach would but be performing its natural functions in restraining so noxious an element from entering the blood, yet the very power of the venom would probably in some way derange the powers of man's internal economy.

The wound occasioned by a snake-bite consists

of two small punctures, often, at first, hardly discernible, yet through them has been sent the deadly fluid.

Any rational cure for a snake-bite should prevent the poison from acting on blood which reaches the heart. To obtain this end:—

1. Get out as much as possible of the poison from the same spot at which it entered.

2. Prevent blood, containing the poison, from approaching the heart.

3. Apply antidotes to counteract the effect of any poison that may have entered the system in spite of Nos. 1 and 2.

No. 1 is to be accomplished by as far as possible cutting out the bite, and allowing the blood to flow freely from the wound so made, thereby washing out the poison: and this may be supplemented by sucking, or by poultices of ammonia, oil, &c.

No. 2 is to be accomplished by making tight ligatures of straps, handkerchiefs, &c. round the limb, between the wound and the heart, so as to stop all circulation between the two, for a time.

No. 3 is accomplished by giving internally large quantities of ammonia, spirits of any sort, or wine, tea, coffee, &c.

It will be observed such rules are practicable under almost any circumstances.

For No. 1 *is required some sharp instrument.* Almost everyone carries a knife; or, in the rare case of one not being ready to hand, broken glass, china, or shells are usually to be obtained; at all events, there are few who do not possess either teeth or nails.

For No. 2 *ligatures are required.* Nowadays it is the fashion to wear some sort of clothing; and straps are far from uncommon; therefore the Spanish windlass of sailors, or the tourniquet of doctors, is always within our reach. The practical application of this principle is as follows:—Tie a handkerchief very loosely round the limb; pass a stout stick through the loop thus formed, and twist it round and round, till the pressure be sufficient to stop circulation.

For No. 3 *spirit, or other stimulant, is required.* And what is here given must entirely depend on circumstances; ammonia if possible, otherwise brandy, rum, or other spirit, wine, tea. These are here put in the order in which they are found efficacious.

Thus, when a person is bitten, he or she should

immediately cut, or cause to be cut, out the piece bitten. Sit down straight; no running anywhere, and no delay. The blood should be at once arrested in its circulation from the bite. First letting the wound bleed freely, then proceed to place tight bandages, in the manner above described. Next poultice the wound, and give the best available stimulant as an antidote internally. If spirit is found to have an intoxicating effect, even after the bandage has been removed, it is proof that any poison in the system has been overcome.

Cures for snake-bites are usually brought forward under the name of antidotes. An antidote naturally takes effect only on poison which has already entered into the system; hence the great importance of measures for absolutely preventing poisoned blood from spreading far.

The direct injection of ammonia into the blood brings the antidote into immediate antagonism with the poison.

Even supposing the antidote to be sufficient for the work, there will always remain two great drawbacks to this plan.

First, it requires some surgical skill to perform successfully the operation of injection; as, for

instance, if a bubble of air enter with the antidote, it were difficult to determine whether this bubble or the poison be most injurious to the patient.

Secondly, all are not in the habit of carrying about with them the special surgical instruments necessary.

People most liable to be bitten are those away in the bush. And for them no remedy is practicable save that which can be applied by themselves and with such implements as are ever handy.

CHAPTER XXXII.

DEATH-ADDER.

SNAKES' LEGS.—SNAKES IN FOOTPATHS.—HOW TO GET DRUNK GRATIS. — EXTERMINATION OF SNAKES. — LADY FRANKLIN'S FUND.

A GREAT many people would utterly discredit the notion that snakes have legs; but yet such is the case.

In certain snakes are found protruding beyond the scales the horny toes of the two hind-legs. Attached to each of them is a weak edition of muscles and bones, and the legs would appear to have no further use than in serving as one of the connecting links which knit together the whole framework of nature.

The most poisonous snake in Australia is the "death-adder." It is preternaturally short, ugly, and thick; and has a disagreeable habit of lying about after dark, particularly in little pathways about dwelling-houses. Moreover, it has no idea of politely moving out of the way of anyone using the

path for its legitimate purpose; being only inclined to give him a vicious nip in the heel.

Snakes have an awkward liking for dwelling-houses, possibly because round them they are sure of a supply of water.

Many tales are told of persons having been saved at night by a cat or dog, which, preceding them along the path, has given notice of the presence of a death-adder, or other snake, by refusing to proceed.

In relation to snakes, we hear of a man who galloped up to a small roadside public, with his wrist bleeding, declaring in alarm that he had been just bitten by a snake. The anxious host promptly plied him with brandy. The willing patient imbibed so freely that at last his host cheerfully left him to rest, seeing that he had fallen into a state of hopeful drunkenness.

Towards early morning the patient recovered his senses, and promptly decamped, having thus managed to enjoy a night's vigorous drinking, without being called upon to pay.

Unluckily snakes cannot be classed among those animals which disappear before civilized man; around Sydney snakes are just as common as up country;

and even in the latter case their favourite resorts are the dwellings of men.

Turning pigs out loose has been found, in America, to drive away rattlesnakes. And, although it is not probable that the pigs feed on the snakes, it is very likely that porkers, poking about all odd corners, render the snake's life uncomfortable, and therefore he retires in accordance with his well-known inclination of avoiding rather than seeking danger.

It would be a great boon could a fund be started in Australia wherewith to buy up and burn snakes' heads.

There is no doubt but that many would hunt out and kill so dangerous a reptile for the sake of gain, who now only kill him when he actually intrudes himself on their observation.

In the history of Tasmania we have good proof that such an idea works well. When the celebrated Sir J. Franklin was Governor of that colony, his wife, of her own accord, and out of her private resources, started a reward of one shilling for every snake brought in. Private fortune proved inadequate to the demand made upon it by the numbers of snakes sent in, and the reward had to be reduced

to sixpence. Still, however, dead serpents arrived in large numbers. The plan was proving an entire success, when it was suddenly knocked on the head from an entirely unexpected cause. It was the custom for well-behaved convicts to be assigned to various settlers to act as their farm-servants, and in other capacities. The paying nature of the snake-killing business, however, proved too strong a temptation to these assigned servants, and the settlers all over the land sent, through the magistrates, strong complaints of the impossibility of getting any work done. All hands were always hunting snakes, and necessary labour was left undone. Owing to these remonstrances, the rewards were abandoned.

However, in a country settled entirely by free people such obstacles could not occur, and we see in New Zealand that the mischievous wild pigs have at once diminished in numbers, the moment a price was set upon their tails.

If vigorous measures were taken to kill snakes, their numbers would rapidly decrease, to the great comfort and safety of mothers and all others having interest in fellow-mortals.

CHAPTER XXXIII.

FISH.

FLY-FISHING. — TACKLE. — MURRAY COD. — SUCCESSFUL BAITS. — SALMON.—THEIR ENEMIES.—STINGAREE STICKING.—FISH ABOVE FALLS.

AUSTRALIA enjoys a pretty good supply of fish, both in salt and fresh water.

A great proportion of these denizens of the rivers and seas have English names, readily applied to them on the most remote resemblance to the home type being discovered.

There are the usual sea-fish: mackerel, bream, whiting, mullet, &c.; and sharks abound everywhere: one of their number, the Port Jackson shark, is remarkable in many ways.

Flat fish do not appear often in the markets, but possibly this may partly be due to the absence of trawling appliances, as in several places the bottoms and banks should afford good fishing grounds.

In the "Eastern waters" of Australia (those

running out on the east coast) are to be found many fish; a small white kind, locally known as the herring, affords good sport with a fly, the fun being much enhanced by the occasional rise of another and much heavier fish, known as the perch.

In some of the more Northern rivers, their tidal waters afford specially good fly-fishing. Crocodiles, which might get in the way higher up, do not appear to relish the brackish waters; while several kinds of fish, affording capital sport to a fly-fisher, seemingly do not get up higher than the tides. These fish are usually on the feed during the night, and appear to occupy the whole of the day in quiet siestas in the mud. Among them we find a fish suspiciously like the perch of the more Southern rivers, often running to over 7 lbs., and when hooked giving plenty of work in the dark, and over a very rough course, with endless snags for him to retreat to unless prevented. These fish hitherto have not had much experience with the uses of artificial flies, and the roughest makeshifts are very successful, provided they be sufficiently large and staring. White should be the predominant colour. If possible, keep the water between self and the moon,

as then you can better see what you are about, when playing a heavy fish.

Those fond of fishing may often have plenty of sport, especially on rivers that have not far to run to salt water. With regard to tackle, I have found a very small case amply sufficient. This contained several good lengths of gut, some hooks ready tied and mostly of large size, a packet of untied hooks, and some gimp, with a card of silk. Besides this case, I carried about with me a winch holding some forty yards of good strong running line, and some "upright" rings. Of course a good fly-rod would frequently have been of infinite use, but a very serviceable substitute can readily be put together.

One of the wonders of Australia is the "Murray cod."

This fish is chiefly composed of its mouth, which is indeed of huge size, and occasionally it attains an hundred pounds' weight.

The most curious fact connected with the Murray cod, however, is that it is the only fish found in the "Western waters;" that is to say, in that vast network of rivers, which converge from all over Australia to the Murray, and so empty themselves into the sea near Adelaide.

This fish, when young and of small size, say under five pounds, is capital on the table; but when exceeding that weight, though still eatable, they are by no means so delicate.

The fishing for it is not at all an intricate job; a good stout sea-line and large hook do not appear to have any effect in deterring them from taking the bait: this latter may be almost anything; perhaps the large white grub out of the gum-tree is best, but meat, and especially liver, proves often irresistible. The fish chiefly affect deep holes about rocks or old tree-stumps, and the bait should be well down to the bottom. Like all other fish, cod have curious ways of being on or off their feed; however, about dark or soon after sunrise appear to be the two best times of day, and large numbers may then be taken.

It is a good plan to place in several lines, each with some different bait, as the cod are often apparently very fanciful, and will only take some one peculiar kind at that special time. On one occasion we camped close to a large hole well known to be stored with plenty of fish. Immediately after supper we put in two lines baited, one with the white grub, usually so successful, the other with the flesh of a

wallaby we had killed for meat. Neither line was touched. At last we threw in a third, on which we put a piece of the wallaby's liver. Its float, an old wine-bottle cork, fell flop on the water, and before it had done with its own bobbings it was being dragged off violently, and forthwith a good cod was brought to grass. Liver was immediately put on the other two lines; and pull out, and unhook, became the order of the day.

When camping out, a cod may be pretty well depended on fresh for breakfast, if a line be left in over-night.

All Australian rivers abound more or less with small turtle, which frequently give great trouble to the fisher of cod. They will nibble away all his bait; and many a man so treated gives up the fishing in disgust, whereas were he to persevere, he would find that very often they will attract the cod, and so prove of use; for they are not, in themselves, worth much on the table.

In Tasmania great efforts have been made to stock the rivers with salmon, and success has, in all probability, attended these efforts.

The rivers themselves are all that can be wished for, save that they are inhabited by voracious eels,

and watched by hungry shags, very similar to the English cormorant. Besides these, the salmon have to face, on their trip to salt water, a long array of enemies. The sea teams with sharks, porpoises, and several species of large fish—barraconta, king fish, &c. Again, birds are very numerous—smaller albatross, petrels, penguins, and divers of all sorts—every one of which is blessed with a sharp eye and a voracious appetite for fish. Thus the trout and salmon, more especially the latter, now being bred in these rivers, will have to take good care of themselves.

The banks of nearly all the streams are for the most part impervious to the fly-fisher, though he can still accomplish great things, as the waters are fishable from a good Rob Roy canoe. Doubtless, before many years are over, salmon and trout from Tasmanian rivers will be finding their way, fresh packed in ice, to Sydney and Melbourne.

In certain shallow bays round the coast of Tasmania thrives the huge stinging-ray, whose name has been locally corrupted into "stingaree."

This monster fish is valuable on account of the oil its liver contains, and its capture is very exciting work. Shallow bays of large extent at a certain

point of the tide form a capital fishing ground. A small boat is used, which is punted and sculled about the flat by a man in the stern. Forward are one or two other men, armed with light harpoons with short lines attached, and each has a lance lying handy. The water is perhaps some two or three feet deep, and one of the fish is readily to be discovered either stirring up the bottom or swimming along, with one of his huge fins ever and anon splashing above the surface. The boat is speedily sent along in chase, and cautiously and quietly worked up when in his immediate neighbourhood. The fish is skilfully struck; and this often demands a very long hurl, as he will sometimes begin to move off long before the boat is close up. When the harpoon is fixed in a large fish, he will give much trouble before the lances have put the finishing stroke: He may then be either hauled on board, towed astern, or left with buoy attached till all in the bay have been killed or frightened away. This is a work of great excitement, and calls for much energy and skill, whether in managing the boat, in striking the huge fish, or in handling him when struck.

The Murray cod, found even in the head waters of the rivers, far above several series of "falls," up

which exist no salmon ladders, presents the problem of how has the fish been primarily introduced to its present localities. If falls absolutely prevent the fish from running up stream, how are we to account for the portage thither of eggs, which must necessarily have preceded the existence there of the fish? In Switzerland, on the summit of the Julier Pass, there is a small lake full of plump trout. Their presence there is as unaccountable as that of the cod in the higher waters of Australian rivers. No floods could possibly enable fish to swim up the thin jets of water which form frequent and high falls below this lake.

CHAPTER XXXIV.

THE PLATYPUS.

FUR.—DIFFICULT TO SKIN.—IMMENSE SWIMMING POWERS.—SPURS.—PLATYPUS ASHORE.—THE USE OF SPURS.—HOW TO GET PLATYPI.—HIS GAMBOLS.—THE WAY TO HIT HIM.—HIS FOOD.—HIS HOME.

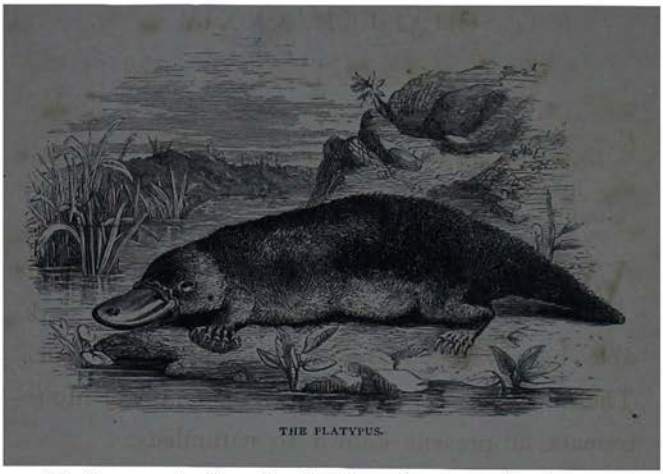
WE now leave the fish, and bring our thoughts to the consideration of two most remarkable beasts, the Platypus and the "Porcupine." These are the only members of the family of Monotremata at present known to naturalists.

First the *ornithorhynchus paradoxus*, commonly known as the "platypus."

As far as outward appearance is concerned, this remarkable animal may be popularly described as a cross between a beaver and a duck.

Its length is about twenty-one inches. The body is long, broad, and flat; tail as broad, and very flat; and then, instead of an ordinary mouth, there is a broad flat bill.

The body is covered with a thick down, or woolly fur, through which protrude longer fine glossy hairs, giving the whole much the appearance of sealskin; though if these hairs be plucked out, the remaining fur much resembles that of the chinchilla.



THE PLATYPUS.

Perhaps of all animals the platypus is the most difficult to skin. Owing to the great development of the cutaneous muscles, the whole operation has to be performed by successive small and delicate cuts with a knife, rendering it a slow and tedious operation. Moreover, the tail, which is one mass of fat, is about as difficult a subject for the skinner as one could well imagine.

In colour, the platypus is of a dark brown on the

back and sides, and of a beautiful silvery white underneath. Occasionally along the belly is to be seen a broad rufous marking, greatly improving the appearance of the skin, which should in this case be taken off by an opening down the back. The tail is covered with coarse, short hair, and is usually worn quite bare on its under side. The fore-feet show a very high development of swimming power, having long, flat nails at the end of the toes; and under the whole of them a dark-coloured web, of great use in the water: this is only attached as far as the base of the claws, and for this reason offers but little resistance to the water in the forward stroke of the paw. It is possible that it may, besides, thus be kept out of the way, whilst the foot is being used for grubbing in the earth. The hind-legs, which are, equally with the fore-legs, short and stumpy, do not appear to be of any use in swimming; they being armed with long and sharp claws, probably both to assist in burrowing, and likewise as a means of offence and defence.

One of the most curious points in the platypus is the possession of spurs, which are attached to each hind-foot of the males, but are entirely wanting in the females. This spur, though differing in

material somewhat resembles the poison-fang of a snake: it is semi-transparent, curved, and has a small aperture just within the point, opening to a canal which leads down the centre of the spur, to a small gland. It is situated, as it were, on the inner side of the ankle.

Many people declare this spur to be the platypus' main instrument of defence, affirming that it ejects poison therefrom; some authorities however, notably Dr. G. Bennett, are entirely against this idea of poison.

In small specimens the spur is long and slender; and in this case the under part of the beak is a light-whitish grey. In the larger animals the spur becomes much thicker and stronger, and the under side of the beak mottled with black. In the largest specimen I have been able to procure the spur appeared as if worn down quite short.

The first live platypus I ever had an opportunity of handling was wounded, but so slightly that he continued to swim about and dive for fully a quarter of an hour after he had been hit. He appeared very confused, and this enabled me to cause him to swim ashore, by guiding him thither with stones. So long as the little animal was heading for the shore, I let

him swim on; but directly he broke off on some other course, the splash of a stone in the water near, and ahead of him, caused him to dive, and to come up swimming in some other direction, which, if not for the shore, would be corrected by repeated stones. After thus guiding him for some time, I prevailed on him to approach to within a few feet of the bank, into some very shallow water, full of weeds; and thence I readily raked him with a branch of a tree.

His conduct ashore was but the first of many instances I have since noticed of the way platypi behave in like condition. He appeared as if stupefied, opening and shutting his bill, lying hopeless on the ground the while; never attempting any use of his formidable spur, even when taken up in the hand. He did but wriggle and kick quite aimlessly.

His strength was great, and his cutaneous muscles of extraordinary use to him. I managed to get a noose of fine strong fishing-line round his neck, and to make it well fast there. Through this loop, just the size of his neck, he managed rapidly to work his whole fat body and thick little legs! A noose round the bill, some half-inch within the tip, held him fast.

That the platypus does not attack men with his spur, when caught, may perhaps be attributable to the fact that the platypus is then entirely out of his element. In the water, possibly, he may be able to make good use of an arm, which, if poisonous, would indeed be most formidable.

In cases where scratches have been received from this spur without evil effect, the result might be due to the reservoir of poison being at the time empty, owing to previous struggles.

Omitting the presence of the spur, the platypus, having no biting powers, boasts no means of offence or defence, save the long claws on his hind-legs, and his great capability for swimming. But these two powers are at the least quite equal to the means of self-preservation possessed by any bird, beast, or fish not predacious.

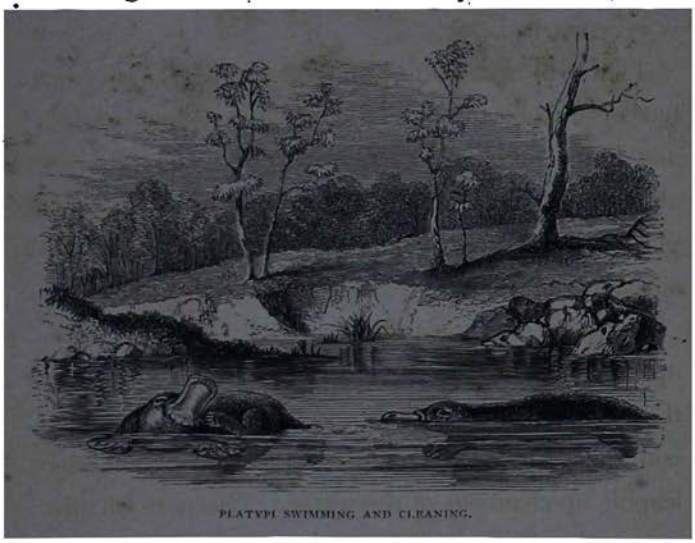
Moreover, the female would be entirely left to the protection of the male, if the spur were really for war purposes.

The difficulty of discovering any other use for this spur is perhaps one of the chief arguments in favour of its being for purposes of offence and defence.

The blunt nature of the spur in older individuals,

together with the fact that the platypus is specially fond of cleaning himself with his hind-legs, has led some to suppose that the juice ejected from the spur is of use for the toilet.

But then, why should the male have so great an advantage over the female in the province of hair-



PLATYPI SWIMMING AND CLEANING.

dressing? Why should the husband have the use of pomade, and possibly insect powder combined, while the wife has to content herself with water and vigorous brushing (scratching)?

In certain parts of Australia and Tasmania platypi are very common, and are readily to be

found, if looked for at the right hours. They enjoy swimming about on the top of the water on sunny days in winter, whereas in summer they only appear after the sun has set.

In the distance they much resemble an English water-rat, though, on nearer approach, the difference is very marked.

They will usually dive on the approach of anyone, but will reappear at the surface almost immediately; and if the observer keep motionless, they will swim about. These curious little animals are of a very playful disposition, and may frequently be seen splashing and tumbling about in the water.

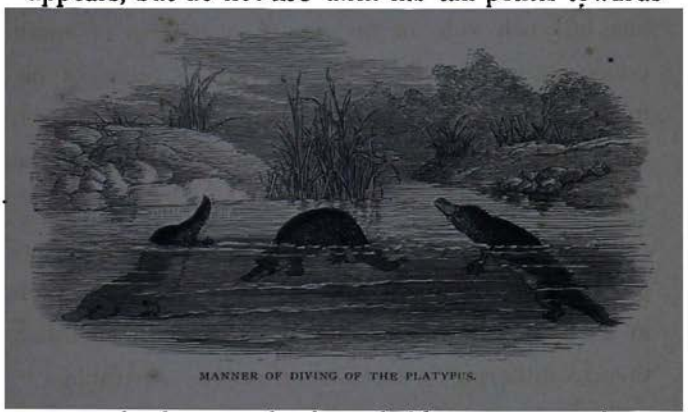
Sometimes they will lie on their backs, and draw up their head and tail until they get somewhat into the position of a hedgehog when in danger; they will then suddenly straighten themselves, thereby leaping up clean out of the water. This performance is occasionally repeated several consecutive times: is it due to the same incentive as that of the grampus, when he leaps out of the water to dash from his huge carcase those pests of his life, the epizoa?

Often too they will suddenly, while swimming along, stop and scratch themselves with a hind or

fore leg, just as does a puppy in the midst of his gambols.

In spite of their well-known ability to dive quicker than "greased lightning," they are not at all difficult to shoot, provided certain precautions be taken.

On sighting a platypus, the moment he dives get behind some favourable tree or bush, put the gun to the shoulder, and cover the animal directly he re-appears, but do not fire until his tail points towards



MANNER OF DIVING OF THE PLATYPUS.

you, as in that case he is probably not aware of any danger, and therefore does not dive too quickly. When expecting danger, he keeps a sharp look-out on suspicious quarters, and is ready to dive instantaneously.

When a platypus dives, he first turns his head up in the air; then, as that disappears, his body arches

up out of the water; and, as that becomes covered by water, his tail finally projects in a perpendicular position.

Of course all these several motions are gone through with great activity and quickness, but at the same time give a very fair chance to anyone desirous of possessing a specimen.

The platypus feeds through weeds in the manner of a duck, but both on the surface and below. He has, on each side of his mouth, a species of small pouch, in which will be found various relics of his food. He is very fond of a small species of mussel, the broken shells of which are nearly always to be found somewhere inside.

In these pouches are also to be found numerous pieces of weeds which have probably not been taken in as food, but merely because the small shell-fish thereto adhering were not otherwise separable.

The platypus is essentially a water-animal, rarely being found on the land, save in his burrows,—most remarkable habitations on the shores of creeks and rivers. These excavations are generally carried on within some steep bank, whose contour they follow within a few inches of its surface; and thus they will occasionally rise almost perpendicularly. The main

entrance is well below the water, and after rising several feet, the burrow terminates in a round chamber, in which the female breeds.

It must be remembered that the rivers they inhabit are continually subject to alterations in the rise of the water, and therefore these curious creatures appear to burrow in high banks and near the surface, that, in the event of long floods, they may be enabled to escape from their homes when filled with water, or possibly even to ventilate the same with fresh air.

CHAPTER XXXV.

THE PLATYPUS AND THE ECHIDNA.

MAMMALIAN.—OVIPAROUS AND OVOVIVIPAROUS.—CONNECTING LINK BETWEEN MAMMALS AND REPTILES.—MOTHER SUPPLIES THE MILK.—YOUNG ONE BORN TO LIVE BY IT.—THE VOYAGE HOME.—FOOD.—PLATYPUS POND WANTED IN AUSTRALIA.—THE "PORCUPINE."—ITS EXTRAORDINARY STRENGTH.—TWO VARIETIES.

THE Platypi's manner of breeding and rearing their young has proved a source of great controversy, as much amongst learned naturalists as amongst unsophisticated shepherds. With many amateur naturalists some confusion has resulted from an ignorance of the proper difference between a true mammal and an egg-bearing creature.

Many, personally acquainted with platypi, are often very vague in their notions concerning the meanings of the three terms—oviparous, ovoviviparous, and mammalian; consequently one hears them indiscriminately state the question at issue as—"Does the platypus lay eggs, or have live young?" or, on the other hand, they will ask,

"Does the platypus lay eggs, or does it suckle its young?" as if these two questions meant the same thing; whereas, in reality, the subject should be distinctly divided at the very outset into two branches.

First, we should consider the great question—Are platypi Mammals or not? and, secondly, the minor question—Are they oviparous or ovoviviparous?

Here we must remember that the great difference between Mammals and egg-laying creatures (whether oviparous or ovoviviparous) is not as to whether the young are alive at birth, but as to whether after birth they live purely by milk from their mother.

Thus oviparous, or ovoviviparous, as applied to snakes, merely means that the egg leaves the female in a more or less advanced stage of development; the young in both instances coming into the world only when the egg breaks. In fact, when hatched, whether inside the mother or out in the sun, the young one is at once perfect: capable of receiving the same food as that on which it will live all through life.

This uncertainty as to the mode of the continua-

tion of its species is, primarily, due to the highly remarkable organization and structure of the platypus.

As has been already pointed out, the marsupial family forms a group of Mammals of a very low type; and we find the platypus, as it were, tacked on to this family as its lowest representative.

Though the marsupial bones in it are fully developed, the pouch is entirely wanting. The shoulder of the platypus much resembles that of a bird, and is still more like that of the lizard tribe.

The whole of the "sternal" apparatus (that is to say, all in immediate connection with the sternum or breast-bone) is closely allied to that of the Saurians; and more particularly in its supply of means for rising to the surface of water for breathing purposes, resembling that of the huge fish-lizard, the Ichthyosaurus.

It has, moreover, some material resemblance to the turtle and other families of low type. However, beyond these internal resemblances, and the sternal apparatus, the rest of the platypus is closely allied with Mammals.

Thus we see that in structure the platypus represents the lowest known type of Marsupials, them-

selves the lowest type of Mammals; and therefore its mode of procreation is of great interest. In the mother and young is to be found the elucidation of the question.

Professor Owen has pointed out the existence in the female of mammary glands; and he has accounted for the entire absence of nipples, by indicating the presence of two oval patches of small apertures in the skin immediately connected with the glands, yet barely discoverable among the fur of the belly: and this would amply account for a supply of milk.

The stomach of a very young specimen, examined by Professor Owen, was found full of coagulated milk.

Moreover, the whole arrangement of the mouth, in the very young, points to the sucking conclusion. The mandibles are extremely soft, and very broad, though entirely minus the length they afterwards attain.

The tongue in the young animal is right to the front, and is nearly as large, when its owner is but a few inches in length, as when he is full grown.

The young, immediately after birth, are incapable of progression, and, moreover, blind — two facts

rendering them immensely dependent on their mother.

Thus, if we agree with Professor Owen, that the gland be mammary, and also take into consideration the evident adaptation of the young to live, immediately after birth, exclusively by suction, we are led to the inference that the platypus is a true mammal.

With regard to the other question, as to whether they are oviparous or ovoviviparous, it is now generally considered an established fact, that the young are produced alive, and not in the shape of eggs, after the manner of reptiles and birds. It seems almost a pity that the latter cannot be the true state of the case, as it would be peculiarly satisfactory to know of a creature which both laid eggs and afterwards suckled its young.

The platypus is one of the very few animals which has as yet not reached England alive.

Its food, consisting of minute shell-fish, would be alone attainable by the keeping large fresh-water aquariums during the voyage, and allowing the platypus to feed in each alternately. Of course a great deal of space would be required in order to keep up a sufficient supply of food. If it were

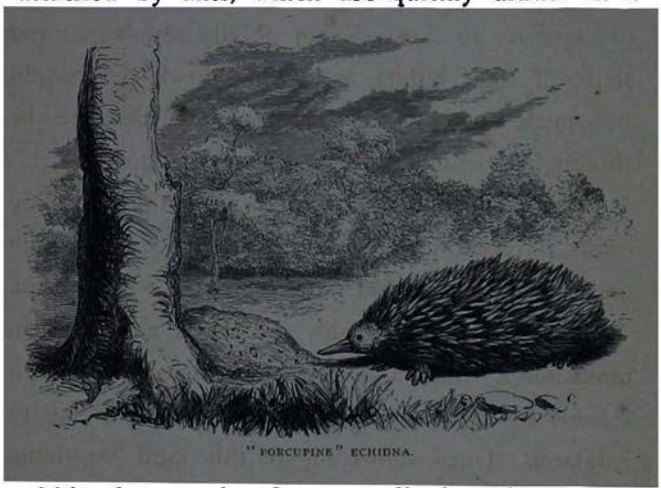
possible, the most practical method of feeding them would be training them from youth up to live on something in general use, whether bread, milk, meat, or even preserved oysters; and thus they would be easily taken long distances.

To any plan of taking them to England great aid would be given were they to be previously kept in captivity in Australia in goodly numbers; and thus all their habits, as regards food, &c., would be much better known, and could therefore be thoroughly arranged for on a voyage home.

In the beautiful gardens at Sydney there already exists a creek, with ponds along its course, which one would think could well be stocked with platypi. Thence they could readily be taken and kept in tanks for a while, and experimentalized upon with a view to their standing a trip, *viâ* the Canal, to England. Until something of this kind be done, our Zoological Gardens will not probably see much of them.

The other Monotremata, the *Echidna spinosa*, or porcupine ant-eater, is locally known as "the porcupine," though no relation to the ordinary type of porcupine. It is somewhat larger than an English hedgehog, and much resembles that animal, except-

ing that the spines are in a higher degree of development, more like those of the true porcupine. The echidna, however, belongs to quite a different class of animals; it feeds on ants, and has a long thin snout, with a small mouth at the tip, from which it sends forth its long tongue; this is immediately attacked by ants, which are quickly drawn on it



"PORCUPINE" ECHIDNA.

within the mouth. In some districts the "porcupine" is very common, and in all the numerous ant-hills its burrow will be seen.

It has extraordinary strength and capacity for grubbing in the earth; and there are stories of its having disappeared through paving-stones! There is most incontestable evidence that at Port Arthur,

in Tasmania, one did really make a hole through a brick wall, by grubbing into the mortar, and then clearing out the loose bricks. The probability is that it grubbed at the softer mortar, and the bricks became loosened and fell out. The Chinese in Australia are very partial to the flesh of the echidna, which they declare makes a capital fry; but the white population have not yet learned to appreciate its delicacy.

In Tasmania we meet with a different variety, having a thick coat of hair between the spines, which so changes its appearance that it has by some been considered quite a distinct species; whereas in reality this presence of hair may be simply attributable to the difference in the exigencies, as regards clothing, of the hot blasts of Australia and the low temperature of Tasmania.

"Porcupines" are to be found curled up in clefts of rocks, about tree-stumps and logs; and can be often readily tracked thither from ants' nests.

CHAPTER XXXVI.

BEARS AND CATS.

KOALA.—THE CRY OF THE WOUNDED.—BEAR IN CAPTIVITY.—THE BADGER.—THE 'POSSUM.—'POSSUM RUGS.—SKINS.—BURNING OUT.—CUTTING OUT.—NATIVE CATS.—DROWNED IN PIG-SLOSH.

IN some parts the "Native Bear" or "Koala" is very common. It is about the size of a sheep-dog in body, but appears to have four arms rather than four legs.

It is a marsupial sloth, and is quite at home on trees, though by no means so on the ground. Its coat is almost woolly, very close, and attached to a thick skin.

It much affects the tops of high trees, and is therefore rather difficult to bring down. When wounded it often utters a cry, much resembling that of a monkey, hare, or child in like condition.

When captured it appears to become tame at once, and is of a very plethoric and stupid nature. Although in some districts almost every other tree

has one in its topmost branches, the colonists have not as yet invented any use for it.

Another curious animal is the Wombat, three to four feet in length, very fat and broad, with extremely short legs. The body is covered with short bristly hair, dark in colour. He lives entirely in or on the ground, and is not inaptly called the "badger."

He is somewhat difficult to find, though, when once seen, he is easily caught; owing to his extreme strength, a strong cord should be quickly made well fast to his hind-leg. Like the native bear, once captive, he becomes remarkably stupid, though lazily vicious if teased.

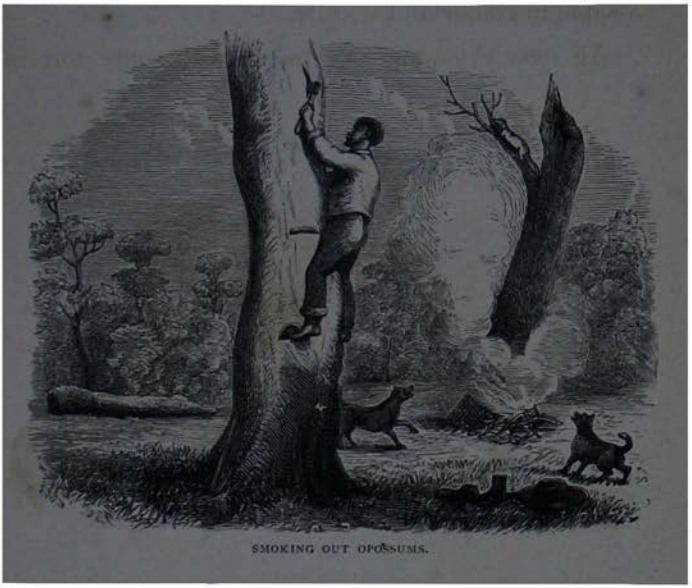
The Opossum or "'Possum," found throughout Australia and Tasmania, is nocturnal, and therefore readily to be captured during the day, more especially as its hiding-place is so easy to find. It is a long-bodied, short-legged, little animal, with long furry tail, by means of which he can suspend himself from the branch of a tree. He is in great requisition on account of his particularly thick fur. Several skins, stitched together, form a "'possum rug;" of great use in cold weather, and always welcome as a mattress on hard ground.

'Possums usually retire for the day into the holes in hollow gum-trees. When going out to obtain skins, it is well to take some matches and a tomahawk. Some dogs are very clever at telling when a 'possum is up a tree; on close inspection most stems will be seen to be covered by the scratches of their claws: should any of these appear green and fresh, as they will on any tree at which a good dog gives tongue, depend upon it there is a 'possum camping in the tree, which may be ascended, black-fashion, by cutting steps up with the tomahawk. Two cuts down, and then one in, make a sufficient rest for the big toe; the tomahawk, hacked into the stem above, forms a handle whereby to pull oneself up; and then the next step is cut on the other side of the stem.

If the tree be old, or hollow, instead of being climbed, a good fire should be lighted at its base, and green leaves burnt in it; the tree itself will probably take fire, and the smoke, filling the hollow, will issue from numerous holes, and thus drive out the 'possum; who will probably adjourn to the highest branches, whence he is brought down by gun, sticks, or stones.

When ascending a tree with a tomahawk, the

animal is cut out; that is to say, the mouth of a hole is reached, and the presence of a 'possum within is ascertained by means of a long thin stick, by which his soft body is felt and some of his hair brought out. The hole is then stopped up with a hat,



SMOKING OUT OPOSSUMS.

and the stem sounded by rapping, till the base of the hole is discovered; and then a fresh aperture is cut, through which the 'possum is dragged out by his tail.

The little beast is, however, very sharp at scratching and biting, and so has to be quickly killed.

The best method is to hang on to his tail, and swing him suddenly and violently against the tree-stem; and his death is instantaneous.

In Tasmania there is a peculiarly large and handsome 'possum, whose fur much resembles that of a sable in colour and texture.

All over Australia one meets with some sort of

NATIVE CATS.

Native Cat (*Dasyurus*), though it by no means resembles a domestic cat. It has a long thin body covered with long hair, a hairy tail, large erect ears, and a sharp foxy face. The commonest sort is speckled with brown and black and white. It lives

chiefly about trees, though found in all out-buildings. It is very fond of fowls, pigeons, &c., though readily caught in any sort of a trap.

It is a nasty, vicious little beast, and so greedy that it often drowns itself in the pigs' tub.

CHAPTER XXXVII.

KANGAROO LIVING.

INGRATITUDE.—KANGAROO RATS.—COURSING.—ROCK-WALLABIES.—THEIR THIRST FOR KNOWLEDGE.—"PADDY-MELONS."—BUSH-WALLABY SHOOTING.—WALLAROOS.—THEIR BITES.—"RED SOLDIERS" AND "BLUE FLIERS."—RIPPING.—USE OF TAIL.—SWIMMING KANGAROOS.

WE now come to the marvellous family of kangaroos. They have proved strangely ungrateful to white men for destroying their two chief enemies, the black man and the native dog, by multiplying prodigiously, and eating up the squatter's grass, of which he very rarely has any to spare. These "deer of Australia" are fast increasing in numbers, and now war has been declared against them by all who would rather not have their sheep starved.

The species commences almost out of sight, in a pretty little miniature marsupial, the "bush-mouse;" a perfect kangaroo of such diminutive proportions as usually to escape all notice.

The smallest of readily appreciable size is the

"kangaroo-rat," which is rather a fat and squat member of the family.

Why it be called the "rat" would not clearly appear, inasmuch as it has but little resemblance to that rodent, though it is strangely like a hare in every way. When scudding over the ground, it would be readily mistaken for one, had it no tail. It likewise makes for itself a species of lair of dry grass, &c., and in this it crouches during the day. A person approaching will sometimes tread on its habitation before it starts off in a swift dodging course, which baffles even kangaroo-dogs. Moreover the "rat" has usually an intimate knowledge of the locality, and before very long will disappear into a hollow log, or other convenient hiding-place.

It is a very pretty sight, when riding along, to put up a "rat," and see it double and turn clean from the very jaws of the dogs, and finally retire up a hollow log, whither its pursuers are too bulky to follow.

Some dogs, however, have the wit, immediately they sniff the little beast in its lair, to approach cautiously, and quickly pounce upon the unsuspecting inhabitant while at home.

Next in ascending size we come to a large class known as wallabies.

Some of them inhabit rocks and rocky places, others scrubs, &c.

The Rock-Wallaby is perhaps the prettiest and most strangely marked of all the kangaroos, in colour, though in shape it by no means approaches

ROCK WALLABIES.

many of its graceful congeners. The dark chocolate colour of the back gradually passes round the sides into the whitish yellow of the belly; the tail is black and covered with long hair. The face is prettily marked with whitish yellow cheeks and black forehead.

In most places where there are rocks these animals abound. In size they are considerably larger than a good big cat. In the early morning they are

to be seen sunning themselves in great numbers on the rocks, in the clefts and fissures of which they have their abiding places.

All kangaroos appear to have a very full development of the bump of curiosity, and, though apparently very quick of ear, they seem strangely slow at catching sight of anything; and even when seeing it they often rather stay to have a good look

BOLDNESS OF ROCK-WALLABY.

at it, than make off in fear. Sometimes whilst walking over rocks or mountains, with rock-wallabies scuttling off in all directions, one inquisitive individual of their number will remain perched on the top of a huge boulder, and calmly stare at the intruder.

I have thrown as many as eleven or twelve stones at a wallaby, all whizzing close past his head, without his moving far, just hopping aside a step or two; and he will not usually make off until a stone absolutely tickles his hair.

It is very easy to shoot rock-wallaby, though it seems a pity so to do, unless parts of them be required for any purpose.

A youngish one makes a capital substitute for hare; in fact is so like it when roasted, or jugged and with red-currant jelly, as to be quite mistakeable for the English game.

Those wallaby which inhabit the scrubs, resemble more, in figure and in colour, the true kangaroos.

Those affecting open scrubs are rather the larger, and go by the name of "brush," or "bush," wallabys; whereas those in the denser scrubs are known as "Paddy-melons," a corruption of their native name of "paddy-malla."

Those acquainted with the hot plains of Queensland well know that the paddy-melons inhabiting the scrubs there, must be deprived of all drinkable water for months at a time. In other parts of Australia they take their morning and evening drink, throughout the year, from never-failing water-holes.

Such opposite conditions of life should in the course of generations considerably modify the original type. It would be highly interesting could some capable anatomist examine specimens hailing relatively from one of these waterless scrubs, and from some more favoured locality.

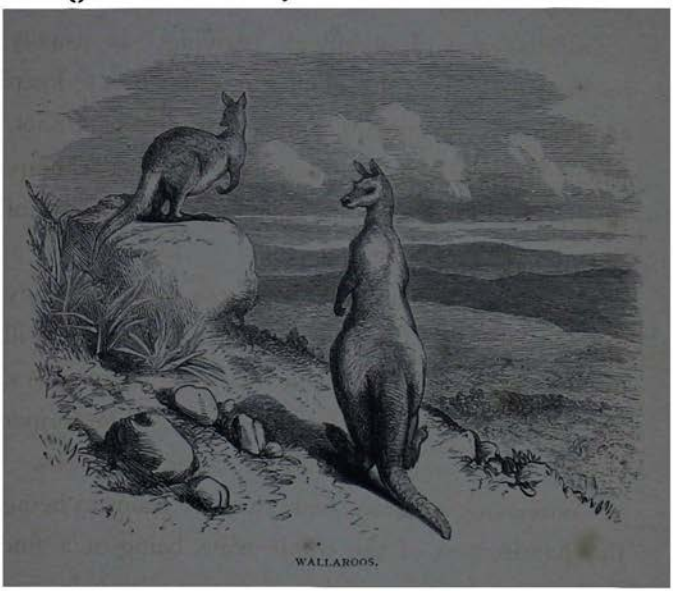
In bush-wallaby shooting, "driving" is usually resorted to, and all the gunner has to do is to keep as motionless as possible, and stand by for a shot, when he hears the increasingly distinct thump, thump, thump, caused by the successive leaps of the approaching game.

Of the larger species of kangaroo there are many different sorts and kinds; which, however, we will divide into those found about rocks and rocky places, and those found on flat or soft country. The former may be called wallaroos, and the latter kangaroos.

Concerning wallaroos first: they lay claim to being the handsomest of the whole tribe, being of a fine dark red colour; equalling, if not excelling, in size any of the kangaroos proper. The female is of a lighter reddish-grey colour, with curiously light-coloured tail.

About their own rocks they could but rarely be caught, were it not that the larger ones seldom run

far, very quickly turning to face the dogs. Their method of fighting is remarkable: owing to the hard nature of the ground they affect, the great claw on the hind-foot is worn very blunt, and hence they never attempt to rip dogs after the fashion of other kangaroos, but actually bite their attackers,—an ano-



WALLAROOS.

malous procedure on the part of one of the poephaga. On first turning to bay, they will either get into a water-hole, or back up against some handy tree or rock, and thus, with great calmness, the "old man" receives the dogs. He will strike down one or two

with his hind-legs, and hold them on the ground; which, if the ground happen to be at the bottom of a water-hole, is by no means conducive to the comfort or safety of the hound. While this is going on, other dogs will be received with the two little fore-paws, hugged, and bitten savagely.

KANGAROOS.

Unless a human being can come up quickly, it is very probable one, or more, valuable dogs may become severely injured, or even killed.

The kangaroo of the flats is the most numerous, and is the one usually hunted. Of it there are various sizes; the best-looking being the "red

soldier," with his fleet wife the "blue flier;" the husband being large and fighting well, and the spouse giving the longest runs.

"Red soldiers," and other "old men" on the plains, embrace the dogs with their fore-arms, and then place them *hors de combat* by means of a

METHOD OF DEFENCE.

vigorous "scratch" with their huge hind-leg, down the dog's body: their middle claw being largely developed and sharp, leaving that body but a poor chance of any future scratchings.

Kangaroos have often been popularly supposed to be greatly aided in "travelling" by their tail: in

fact, one species received its scientific name of Halmaturus from this supposition.•

Whilst travelling, however, the tail is of no use but as a balance for the body, which, being thrown so far forward, must have a heavy balance on the other side of the great legs. It is popularly believed that the successive thumps on the earth, made by a kangaroo whilst moving, are caused by the tail;

TAIL WHILST MOVING.

whereas it is simply the feet taking successive jumps. The tail is, however, used for the purpose of sitting, or rather standing, upon. A kangaroo whilst feeding, rests on its two hind-legs, and has its tail trailing behind. Then, if startled by any noise, it will toss up its head and body, not only to a perpendicular, but beyond it, throwing an evident weight on the tail; and thus, as on a tripod, it will

listen for further sounds. It is noteworthy that the little Chinchilla of Syria uses its long tail for the same purpose.

TAIL WHILST STATIONARY, FEEDING, ETC.

Kangaroos are by no means bad hands at swimming, and are occasionally to be seen crossing rivers and water-holes.

CHAPTER XXXVIII.

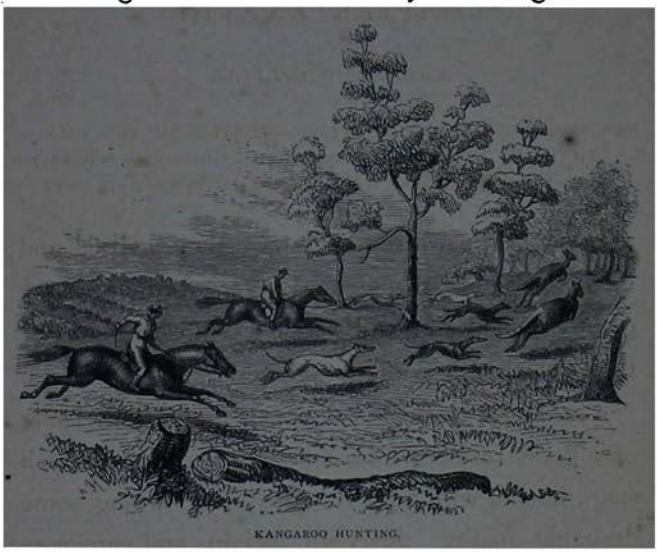
KANGAROO KILLING.

KANGAROO DOGS.—MODE OF ATTACK.—CONTROL OF THE PACK.—"RIDING TO THE DOGS."—INQUISITIVE KANGAROOS.—WHERE TO AIM.—TAME KANGAROOS.—EATING THEM.—MUTTON OR BEEF.

OWING partly to the sport they afford, and partly to the grass they eat, kangaroos are greatly hunted both with the dog and with the gun: the former method affords the best sport.

The kangaroo-dog is a heavy greyhound; being usually the result of a cross between grey-, or Scotch stag-, hound, with bull-, or other dog, owning some desirable quality. Strength, weight, and gameness are required to throw and to fight large kangaroos: nose is valuable in the find; lasting powers and swiftness in the runs after any "fliers." The usual method of attack is for the dog to seize the animal by its hind foot or leg, and so send it crash on to its face; however, some are great at pinning the throat; such a dog, usually of the Scotch breed,

will often be very swift, getting up with the kangaroo first, and then keeping alongside till other dogs come up and throw it, and then he will fix on to the throat and never let go his hold, though he be swung and thrown about by the kangaroo in



KANGAROO HUNTING.

its struggles as it recovers itself again and again. Such dogs are more liable than others to be ripped; their only idea appearing to be to fix on at the throat, utterly ignoring the while the powerful claw of which other kangaroo-dogs are by no means oblivious.

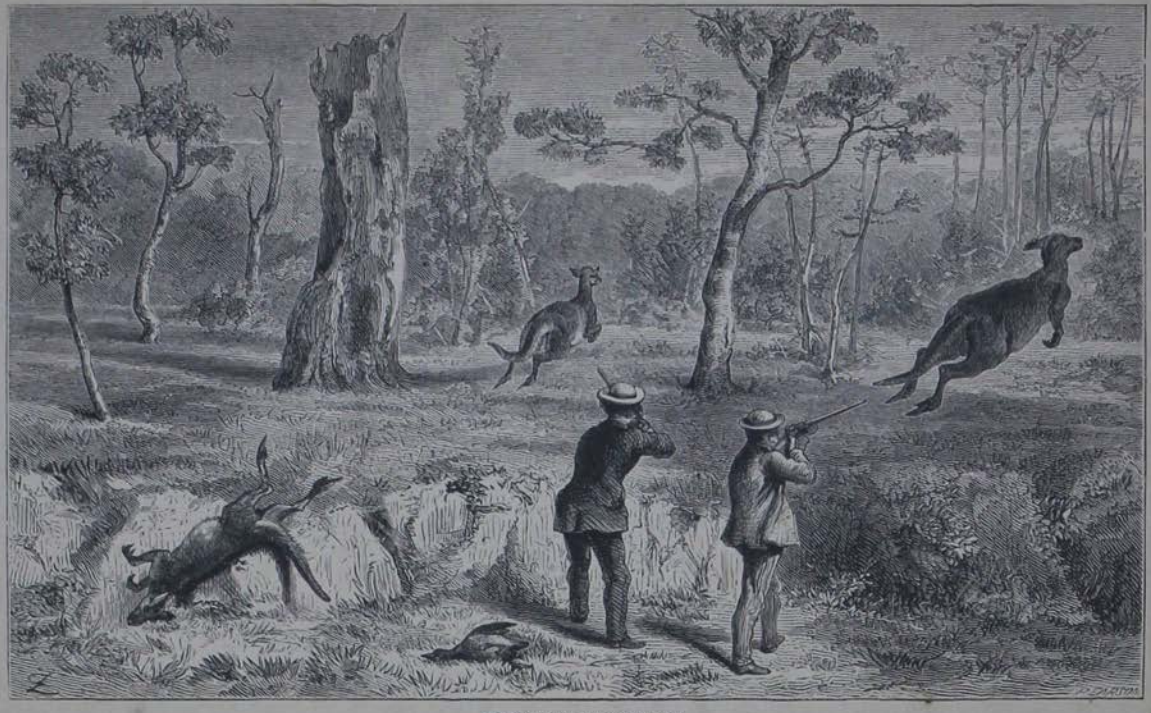
One great point is to have all the dogs well under

control, as this gives them a vastly better start. When riding in search of kangaroos a sharp look-out should be kept by the riders, who can thus keep an eye on the beasts long before these can see the dogs, provided the latter be kept close in by the horses, instead of ranging about the country.

Kangaroos will usually start off one by one, and so, on the first one's moving, some well-understood signal should be given to the dogs, by which they will understand in which direction they are to start, as, being so low down, they do not catch sight of their quarry.

When many dogs are out, they are almost certain to separate after different kangaroos, and then the riders usually separate likewise—following either their own special dogs; or, in the prospect of a fight, the largest of the kangaroos; or, in the desire for a "fly," a middle-sized doe that looks like going.

"Riding to the dogs" is very exciting work, chiefly owing to the nature of the country, which affords one succession of obstacles to be avoided: leaning-trees and branches overhead; logs, stumps, and dead trees on the ground; numerous rocks, stones, gullies, and water-holes in great part hidden



SHOOTING KANGAROOS.

in long grass. At the same time the dogs and kangaroos have to be zealously followed, or they will speedily be irretrievably out of sight.

Kangaroos are easily shot with ball, as they so often, through their inquisitiveness, put, or keep themselves, within range.

On one occasion, whilst riding home with a friend, after a day with the ducks, we put a ball into a long single-barrel; and presently spied some kangaroos. B. went off, sneaking on the ground, with the single-barrel; I remained with the two horses and a double-barrel about a hundred yards away from some rocks, from which he fired a shot at a mob of six or seven. The ball missed. They all threw themselves up on their tails and hind-legs, listened, looked round, caught sight of B. and of the smoke hanging in the still evening air, and with one accord gracefully thumped towards him, and, halting within about ten yards, took a good look at him, whilst he silently abused the hundred yards which separated him from the double-barrel. The instant he moved to seize a big stone they all fled, and the rock hurtled harmlessly through the air.

Not many days afterwards we were at the side

of a water-hole, having just landed a duck, when we heard kangaroos approaching, and at once we became motionless.

Before proceeding to drink they took a look round, and, espying us, came close up to see what we were. A huge male, a few yards from us, halted in advance of two smaller females. B. let drive with one barrel at the male, which however, at the instant of our moving, sprung high in the air, allowing the charge to pass under him into the chest and lungs of one of his wives: as he thus made off the charge from the single-barrel smashed into his thigh; while the other wife had the contents of the second barrel of B.'s gun sent after her in her flight. Whether she fell or not remains to future ages unknown, as we had to use all our limbs and senses in the capture of an extremely lively young one, which leapt from the pouch of the other fallen doe.

Though not over easy of approach, it is very rarely that a shot cannot be obtained. The haunches should be aimed at, as they afford a large mark, and the ball entering almost anywhere there, puts an end to the kangaroo's powers of going away; and then the animal is readily knocked on the head. Whereas, if, according to the ordinary method, the lungs or

head be aimed at, they, being of small size, are very easily missed, and the ball loses all effect.

Young kangaroos are easily obtainable, and, provided they survive the first few days of capture, soon become very tame, and are interesting pets about a house. They readily make friends with the station-dogs, but their usual fate is slaughter at the hands of the dogs of some friend who comes to stop the night. On one occasion I shot a rock-wallaby, which had a young one, scarcely clothed in hair, in her pouch. We were camping out, and I kept this little fellow under my blanket, warm, but starving, as we were now miles from milk. We returned home to the station, and I procured a bottle and stuck two quills through the cork, one to let in air, the other to let out the milk, sugar, and water with which I filled it; and on to this quill I tied some linen, through which the little animal used to suck the milk: soon he was able to drink out of a saucer, and grew fast, becoming very tame.

It is curious that very commonly in Australia there exists a sort of prejudice against eating kangaroo flesh. Now to those just arriving in the country this venison appears very nice; and certainly is as good as, if not better than, many other meats,

save in its want of fat, which, however, can be easily remedied by the accompaniment of bacon, fried, or, still bêtter, applied as larding:

Certain Australians the writer has known, who, declaring the flesh to be very nasty, and adhering to the opinion when pressed to taste it once again, have actually held argument when eating a piece of grilled kangaroo steak (its kangaroo origin being unknown to them) as to whether it were beef or mutton!

The *ménus* up in the bush would be of a much higher order, were everybody to follow the fashion of certain wise people in introducing kangaroo dishes on their tables. Roast and jugged wallaby; ditto kangaroo-rat (without its name); kangaroo-haunch, steak, &c.; not forgetting the tail, which is so admirable in soup or stews,—are sources of much variety.

CHAPTER XXXIX.

BIRDS NOT GAME.

EAGLE-HAWK.—CROWS CRYING.—MAGPIES AND MICE.—"LAUGHING JACKASS."—"SOLDIER BIRDS."—BIRDS' CALLS.—PARROTS.

AUSTRALIA has a splendid share of birds, of every sort and kind. Birds of prey are pretty numerous. The eagle-hawk (well named, for its appearance lies just between those of its two cognomers) is to be seen soaring round and about mountains; when three or four get together, it is a beautiful sight to see them chasing one another down through the air: turning over and over, and sometimes, in their excitement, coming right to the earth. They are very partial to young rock-wallaby; but, during the lambing season, they prove troublesome from their peculiar habit of taking a great interest in lambs.

There are smaller hawks ready for a stray pigeon; and buzzards to clear off the carrion. These latter are assisted by vast numbers of crows and "mag-

pies." The large black crows are to be seen everywhere; they make a peculiar caw, often reaching a high pitch, and then it is heard a great distance off, and exactly resembles a child crying.

The Australian magpie is a species of shrike, very much resembling, in colour and size, the English magpie, save that it has only a short tail. These birds are great favourites, and are usually found in large numbers round any dwelling-house. They have a remarkable faculty of warbling loudly, and will often come and perch close to a man at work, and sing to him. They are frequently kept tame about houses, and then show remarkable intelligence. They are very clever at catching mice, with which they will play as does a kitten. However, they are, on the other hand, particularly fond of carrying off and hiding pipes, thimbles, scissors, silver spoons, &c. Hence it is as well to keep them outside the house.

Perhaps the most remarkable bird in Australia is the "laughing jackass," or gigantic kingfisher, as our friends the naturalists would call it: it is met with all over the bush, not necessarily near water; and, as it lives on snakes and lizards, it is by no means a useless member of society. It owes its chief fame,

however, to its peculiar note, which it gives out at regular hours of the day. Hence it goes by the name of the "bushman's clock;" and certainly is of great use in waking him up in the early morning.

When camping out, "jackasses" are to be heard the first thing in the morning, answering each other from tree to tree. Here is an attempt at their cry; to be read by a child at a good pace, and loud:—

Ka, ka, ka, ka, ka, ka, ka, ka, ka, koo-ook, koo, koo koo, koowa, ă, wah, awah, ah ah ah ah, ka ka ka, &c. This all comes out very loud, the finishing ah, ah, ah, ah, ka ka ka, &c., much resembling a laugh, and often sending off human beings in chorus by its "ridiculosity."

Another curious bird of the bush is the "soldier bird," or minah, as it is sometimes erroneously called. It is about the size of a blackbird, is of a light colour, greenish and grey. This bird is particularly fond of celebrating the advent of any human being; it seems moreover to have a wholesome dread of him; for on his approach it immediately proceeds to fly about in the tops of trees, over his head, exclaiming "a wăt, a wăt," just as though Lord Dundreary were screeching out, "a rat,

a rat." The soldier bird is then speedily joined by his mates, who all lend their aid in the chorus.

This peculiar noise is for the most part very objectionable, inasmuch as it often informs a kangaroo, or mob of ducks, that some one is sneaking on them; however, on occasions it proves useful. Once I had wounded a duck, and lost it. Presently, whilst reloading, my attention was attracted by the noisy chorus of a group of soldier birds in a clump of rushes. Curiosity led me thither, there to discover my lost duck.

Soldier birds in the evening congregate round water-holes on overhanging branches; and then take headers in and out in endless succession, jabbering and chattering the while.

Swallows are pretty common, though of brighter colours than those in England. Throughout the bush are to be seen various brilliant bee-eaters, and other birds.

The most striking feature in connection with Australian birds is their peculiar variety of cries. We have already noticed the laughter of the jackass, the baby-like crying of the crows, and the loud and sonorous warbling of the magpies. There are birds that whistle exactly like men calling dogs. Another,

a species of hawk, whistles right down the scale very prettily. Again another bird's call exactly resembles a bell. "Organ-birds" and "mockers" abound, giving vent to various calls; one, when sitting close overhead, gives the exact noise of a dog barking a long way off, and has thus often deceived the weary traveller into the hope that he was approaching some station. A species of owl shouts so exactly as would a man looking for his species, that even old bushmen, new to a district where he exists, have been known to shout in return, from their camp-fires.

Along the sea-shores are to be found pelicans, and various waders, including a very large crane, of handsome colouring, the "jabiru." Another, but plainer in decoration, is often tamed, and is known as the "native companion." Off the more southern coasts are to be seen the various species of long-winged albatross, and petrels.

The Australian bush is the great home of the parrot family; and they are to be met with of all colours and sizes. The large white cockatoos are seen in vast flocks, with their sentinels posted on neighbouring high trees.

The nests of parrots are usually in the hollows of

the gum-trees, and thence the young are readily to be got for keeping in captivity. Most of the parrots are very good when cooked, and are especially acceptable, and always easily obtainable, when one is camping out.

CHAPTER XL.

LAND GAME BIRDS.

GAME LAWS.—EMEUS.—STALKING BLACKS.—TURKEYS.—STONE CURLEWS.—SPUR-WINGS.—LYRE TAILS.—SCRUB SHOOTING.—PIGEONS.—SQUATTER PIGEONS.—FILLING THE POT.—DOGS.—QUAIL.

IN the various colonies exist game laws prohibiting the destruction of certain birds during their breeding season. In the more thinly populated parts this law of course is not very strictly obeyed; nevertheless it is manifestly of great advantage to allow the birds to increase, at a time of the year too, when they are specially unfit for food.

The Emeu is still pretty common, more especially in the less inhabited parts, though it is fast becoming scarce. It has no lasting powers, and is accordingly easily run down either by a horseman, or a dog; the latter, however, has to avoid the vigorous kicks of the bird's heavy legs.

Almost everybody is, very properly, entirely against their being killed. They do little or no

damage either by eating grass, or in any other way. A great drawback, however, against their propagation and increase, is the value of their eggs, which are eagerly sought after, and fetch a good price anywhere.

The blacks have a very ingenious way of killing emeus, which they do for the sake of the oil, skin, flesh, and other parts of which they make use.

A black, on spying emeus feeding on a plain, will cover his back and head with an emeu skin, allowing it to hang down well on the side towards the unsuspecting birds. In his right hand he will carry, hidden by the skin, a boomerang and one or two throwing-sticks or "waddies." Then his left arm will protrude beyond the skin straight out to the elbow, and the fore-arm will be bent up, with the hand at right angles to it, thereby forming a capital imitation of an emeu's head and neck.

Every now and then, this hand or head will be brought to the ground as if for feeding; and as he walks along he imitates every motion of the bird, whilst at the same time, by means of the big toe, a spear will be dragged along the ground. (*Vide* Frontispiece.)

The black will quietly and slowly proceed thus

till about ahead of the birds: then he stops; and they will innocently feed right up to him. He will then suddenly throw off the skin, catch up and throw the spear, piercing one emeu; another will be dropped by a blow from a waddy; and a third will very probably be stopped in its flight by the boomerang. The black then rushes up, and despatches all three.

A friend of mine was once riding across one of the vast plains in Queensland. As he and his companions were just rising a ridge, and as their eyes cleared the summit, they saw one of the very wild blacks of the district walking quietly along towards a small scrub in the middle of the open; they pulled up to watch what he would do; his sharp eyes, however, soon detected the white men, though to him was visible only their heads: he dashed into the scrub.

Almost immediately from the opposite side of the scrub darted out what to them appeared to be an emeu, driven out by the entrance of the black; so they gave chase, but quickly discovered it to be only the black, acting emeu, and never expecting that the white men would give chase to what was, in those parts, a very common bird.

Another large bird found on the flats is the great bustard, or "turkey" of the colonists. It is a roving or migratory bird, arriving in great numbers at one season of the year, and going elsewhere during the other portion of the three hundred and sixty-five days.

As with most birds, the wetter the weather the wilder the turkey. In very hot days they are far easier of approach. They usually occur in small droves of from four to seven or more in each, and can be most readily brought within range off horseback, or out of a buggy or other vehicle.

"Driving" is very successful if they be wild. The gun, or guns, is, or are, planted (*Anglicè*, hidden) in any convenient place, and the driver, having got the turkeys between himself and the guns, starts them, and then they flap along close over the guns.

When out alone, a very good plan is to crawl as near as possible from the direction in which they are feeding; and then, if one be only to leeward of them, and do not fall asleep, as did a friend of mine, a small outlay of patience will be amply repaid by the turkeys bringing themselves within easy shot. Something to read is of great aid to the powers of patience.

The young birds are first-rate on the table, but the old large ones are uncommonly tough. These birds lay eggs all about the open bush, with hardly any nest or other protection.

The stone-curlew appears in most parts; its presence being chiefly discernible by its vigorous cries uttered at night. It is rarely to be seen, partly owing to its colour and habit of crouching low on the earth, but more to the fact that it seldom "stalks abroad" by day.

It should be looked for in small clumps of saplings, and may readily be shot off a horse, though it is very chary of allowing those on foot to get within range.

The curious spur-winged plover is very common, its usual haunt being the courses of creeks and rivers. It has two remarkable spurs on the shoulder of its wings, with which it would appear to defend itself.

It makes a very good pie, and can be pretty easily got at. No looking for it is required, inasmuch as it sets up a vigorous cry directly a man appears in sight. The greater part of the year it is to be found in flocks. They may be readily shot from on foot, by the plan of walking round and round the

flock in a gradually lessening circle; but the great pith of the plan is never to look at, or appear to be desirous of shooting, the birds. On first approach, when say within an hundred yards, they will begin to run away screaming; then if the walk be commenced they will continue to run away, at right angles to the course; and thus will be gradually worked into the centre of a reduced circle, whose radius may readily be brought to some twenty-five yards or so.

In a great many districts where scrubs exist, is found the Talegalla or "brush turkey;" a very good bird on the table, but chiefly remarkable on account of its curious nest, which consists of a huge heap of dead leaves, sticks, grass, and other rubbish, piled up three or four feet in height, and sixteen or eighteen in circumference round the base. In such a heap several hen birds deposit each one egg, which is left to be hatched by such warmth as may arise from the heating of the heap, and the power of the sun.

Another denizen of the scrubs is the beautiful Lyre bird, sometimes known as the native pheasant. The lyre-like tail of the cock-bird is well known. In general appearance, though not in colour, this bird, more especially the hen, exactly resembles a

pheasant; but a clear sight of its colour is seldom obtained, it being usually only visible perched, or fluttering about, among the thick tangle of some dense scrub.

Hence also it would be exceedingly difficult to find, were it not that the cock-bird boldly proclaims to all the world his whereabouts: his note is an imitation of any or all birds in the district, only piped forth with ten times the force and distinctness; it is a highly magnified edition of all the lesser sounds about. The cock-bird is thus obliging more particularly in hot dry weather; and the would-be owner of a lyre tail has but to creep patiently and perseveringly through the tangled scrub, in the direction of the note, and he will in all probability get his shot, though he may have to climb for the dead bird, upheld by "vines" and other scrub.

Away at an out-station one morning at daybreak, I got up, breakfasted, caught my horse, and started up the track to a "free-selector's." I found him at breakfast with his wife and two little children. He was soon ready, and off we started for some thick scrub, called the "Cedar-brush," in which it was said there were lyre birds.

This cedar-brush was very like a good thick wood

at home, excepting for the huge trees projecting above it. It spread all over the steep sides of the mountains, and out of it fig-trees of enormous size reared their lofty heads, their lower parts of strange form; the stem standing, as it were, on a clump of many legs, formed by the arching roots.

We hobbled our horses, and entered the scrub. A Scotch mist enveloped everything, and, what with the dripping wet and tangled creepers, progression was by no means easy. Presently we heard a loud whistling, so scrambled towards it; the whistler flew away before we could get a shot at him; however, a bird flapped through the thicket over my head: I fired, and a hen lyre bird lodged in the creepers.

That evening, on our way home, we saw a native bear with a young one on her back, on the top branches of a blue-gum. She was curiously energetic at continually keeping her own body between us and the young one, of which we could only get a glimpse by simultaneously watching from the opposite sides of the tree. Want of time prevented our capturing this juvenile Koala.

In Australia there are numbers of wild pigeons, all very acceptable as food. The beautiful light-

grey wonga-wonga is found chiefly in scrubs, and, though of great size, has hardly the delicacy of the smaller species.

A very handsome strong bird, the Bronzewing, is to be found about the open country, frequenting stony ridges, old cattle camps, &c. &c. Owing to its colour, it is often difficult to see when on the ground; it will, however, usually allow of a pretty near approach, and then rise, giving a fair flying shot. If it escape the shot, it will usually settle on some tree within sight, and thither it can be cautiously followed.

In dry seasons pigeons and other birds are easily attainable by watching at a frequented water-hole towards evening; especially if all neighbouring water be rendered unavailable by being covered with brushwood, or guarded by scarecrows.

Perhaps the best of the Australian birds for the table, and also for facility of bagging, is the little "squatter" pigeon. It is small, of a lightish colour, with a dark crest. Instead of seeking safety in flight, it seems rather to prefer hiding, by "squatting" low on the ground. This it will do till a man, or horse, is nearly on the top

of it, but it rises on even the distant approach of a dog.

It may sound to English sportsmen rather like murder, to walk quietly round and about some twelve little pigeons, crouching down to the ground, and then deliberately to fire, getting perhaps five or six at one shot; but it must be remembered that that shot is not fired to make up a long number, for the gratification of the owner, or gamekeeper, but simply in order that the being at the nether end of the gun may, that evening and next morning, have food to keep up his strength at the least possible expenditure of ammunition.

When put up by a dog, or even by a shot, they only rise to the overhanging branches, and there squat, to be picked off one by one with half charges, if the pot still require filling up. This peculiar habit of theirs will probably have the effect of causing them rapidly to disappear, and perhaps become extinct.

Quail are pretty plentiful up country, and are usually to be found near creeks, and particularly in the "cultivation paddocks," near stations. They often appear in great numbers.

A good dog for putting them up would be very

valuable, but owing to his being so seldom worked, he would probably rapidly get out of training, and then be almost worse than useless.

Walking up quail, even with the help of a chain, is specially unsatisfactory, as they are very apt to keep running from one on all sides, instead of rising.

CHAPTER XLI.

WATER GAME-BIRDS.

BLACK SWANS.—DUCKS IN TREES.—WATER-HOLES.—WOUNDED DIVERS.—ARTIFICIAL RETRIEVER.—SHAGS.—MUSK DUCK.—HOW TO GET HIM.—SNIPE.

THE graceful black swan may be much more readily seen and watched in England than in Australia, where it is only found in the wilder parts, in the rare neighbourhood of plenty of water, though there it occurs in large numbers.

Duck-shooting is in most parts very good; the two most common sorts being the "wood" and the "black" duck. The former is a small species of goose, and is, for many reasons, rather a peculiar bird.

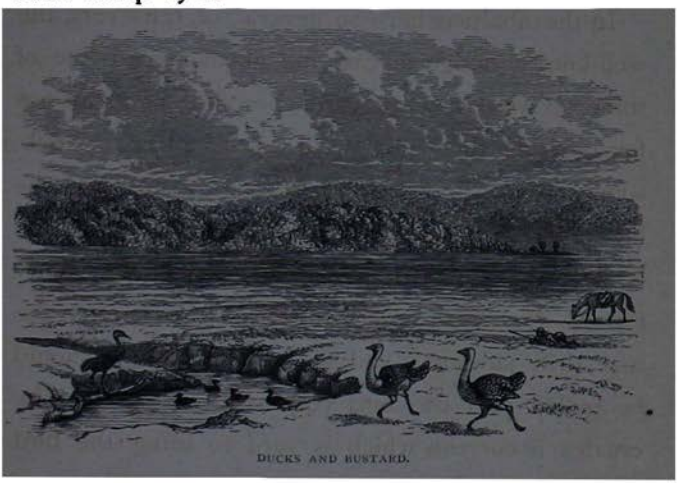
It is very common, and moreover is to be found up small creeks with but little water in them. It probably has gained its name not only from its so frequently being seen flying through and among trees, but from the fact that it both builds and perches on trees. Two or three times, at first, was

I puzzled by this peculiarity; having marked down a mob in the distance, and sneaked on it, I have cautiously examined the whole surface of the ground, and, being just on the point of giving up the search, have been startled by the geese flapping off from some tree overhead.

The bird is of a light-bluish grey colour, with a patch of white and green on either wing, and a prettily mottled breast; the cock bird having likewise a dark-red head and neck.

A creek in Australia usually consists of a water-worn course filled with sand and rocks, along which flows a stream of water in wet weather; but, if rain have not fallen for some time, the course is dry, leaving unconnected "water-holes" of greater or lesser length, every here and there. It is in these water-holes most "ducks" are found; save those "geese" which show a great inclination to roam far on either bank. Wood-ducks, when put up, follow the course of the creek, either up or down; but it should be noted as a curious fact, of which good use may be made, that generally if fired after, even when out of shot, they will presently return and fly right over the shooter, who, if he have had time to reload, will thus obtain another chance.

Wood-ducks when wounded in the water immediately make for the shore, on which they may readily be caught; but until they have reached the bank, the shooter should keep out of sight. They will run long distances, and are very quick at hiding behind logs and trees, and in other ways escaping even sharp eyes.



DUCKS AND BUSTARD.

The "black duck" is a fine large true duck of a darkish brown colour, with light patches on either cheek. There are, besides, numerous other ducks, more or less common in certain districts: such as red duck, widgeon, and shovellers.

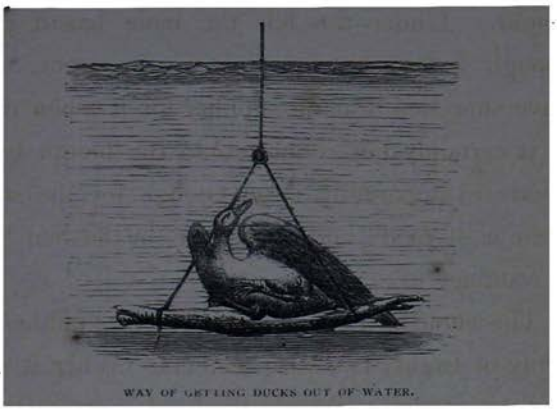
Black duck, when wounded, take to diving as a means of escape, and thus often cause great trouble.

The best way is to give a second shot before the bird knows one's whereabouts, or he will dive so quickly that it becomes very difficult to hit him. And they are apt to become to all intents and purposes invisible, by submerging their bodies, leaving only their bills on the surface among weeds, &c.

In the absence, here so general, of retrievers, the well-known dodge of carrying about a good line of some sixty or seventy yards, becomes of great use for bringing the game to shore. A piece of stick, some foot and a half long, is easily found, and the line made fast to the middle: this stick is thrown beyond the object in the water, and drawn gently towards the shore. Should the stick, as is often the case, drift sideways, and so miss its aim, it should be pulled past the bird very swiftly, as it thereby creates a current, which is sure to bring the bird much nearer the shore.

An improvement is to have the line arranged at its end, so as to make the two sides of a triangle, with the stick for a base, and a bullet at the apex. The line should be rolled round the stick, till the bullet is close to it, and then thrown. The triangle of string may be drawn gently under the bird, by

allowing the bullet to sink it; and then, when a strain is put on the line, the bird becomes enclosed, and is thus brought to land.



WAY OF GETTING DUCKS OUT OF WATER.

Up most of the rivers and creeks is found a pretty bluish crane; and also one or two species of shag, which sit perched on overhanging trees, watching the water. These birds curiously appear hundreds of miles from the sea; in fact evidently belong entirely to fresh water.

Water-hens are readily obtainable, and are capital on the table; grebe, too, abound, though their extreme cunning renders it difficult to bag them.

A very interesting bird indeed is the "Musk-duck" (*Biziura lobata*). It is about the size of a goose, though with short neck, and small wings of

apparently little or no use for flying purposes. It has a strong scent of musk, and, excepting its head, much resembles a penguin. It is of a very dark colour. Under the bill the male has a pouch, though for what purpose is not apparent. Some have supposed it an air-supplier for it when diving. It is certainly not connected to the mouth by any apertures apparently large enough for the storage therein of food; and, moreover, in the hen bird it is wanting.

The whole bird is built for diving, its tail being an array of twenty-two hard feathers. When it scents danger it swims with only the head above water, and dives even more rapidly than does the Platypus. It is therefore extremely difficult to shoot.

If it can be got into a smallish water-hole, say under one hundred yards in length, it can be safely secured by the shooter supplying himself with sticks and stones, and pelting the bird each time it appears on the surface to breathe. As he raises his arm it will disappear, and after doing so some eight or nine times it begins to feel distressed for want of an airing; it attempts to flap its little wings. This is prevented the first two or three times by means of stones; then the gun is got ready; and as it comes

to the surface for about the twelfth time, it is too utterly blown to dive again without flapping its wings; it is fired at while standing above the water and quite unable to make a sudden dive.

I never heard of anyone trying it as food, and probably the smell is enough as a deterrent. It appears, outwardly, almost a further connecting link between the Platypus and birds.

Snipe, much like the common snipe, are numerous in many parts, though they have peculiar ways of disappearing for years, and afterwards becoming again as plentiful as ever.

CHAPTER XLII.

DOGS AND FLYING FOXES.

DINGOES.—PARTIALITY FOR MUTTON.—HOUNDS.—FLYING FOXES.—DESTRUCTION OF FRUIT.—CAMPING GROUNDS.—EASY TO OBTAIN.

THE "native dog," or Dingo, is the great enemy of the squatters, though, through his having compelled them to place every individual sheep immediately under the charge of some one man, he has probably done much towards the giving Australian wool its good name for fineness of quality.

Dingoes are essentially roamers, and appear in certain districts every now and then, sometimes in large numbers; very probably being driven thither by drought in neighbouring districts.

They somewhat resemble in nature as well as in appearance a small wolf, and are of a reddish colour, though a black variety exists, probably thoroughbred.

They are very fond of mutton, and, if they get the chance, will do great injury to a flock of sheep: as they bite, without killing, perhaps thirty or so to every one they eat.

They are accordingly hunted down on all hands, and by every means possible.

Fox-hounds have given splendid runs after "dogs," which are "found" in tufts of grass, among fallen trees, &c., and usually a single one can be started; thus the hounds are kept together pretty well, though there is great chance of their breaking off after kangaroos, mobs of which a Dingo often makes for. The hounds are probably not in first-rate order, and not under the immediate control of the whip; and thus they very often part, and so get lost for some days, besides spoiling the run.

However, if the "dog" keep clear of kangaroos, a splendid run is usually the result. A Dingo can, however, be run down on a quick horse; as he can be started at a killing pace, altogether unmindful of second wind, and thus soon become knocked up, and then easily knocked on the head.

The "flying fox" is a huge bat, whose wings often cover an expanse of three feet or more. His coat is of thick brown fur with a reddish ring round

the throat. On his face he wears a perpetual grin. His food is fruit, and thus he causes great trouble to people owning gardens. His sudden and irregular visits to certain districts, as that to Sydney in 1868, may be accounted for by the presence of severe droughts in other quarters.

FLYING FOX EATING PEARS.

He would appear to be particularly fond of the flower of the gum-tree, but is by no means ignorant or unmindful of the lusciousness of pears and peaches.

He destroys a large amount of fruit; hanging by his two hind-legs, he swings himself along

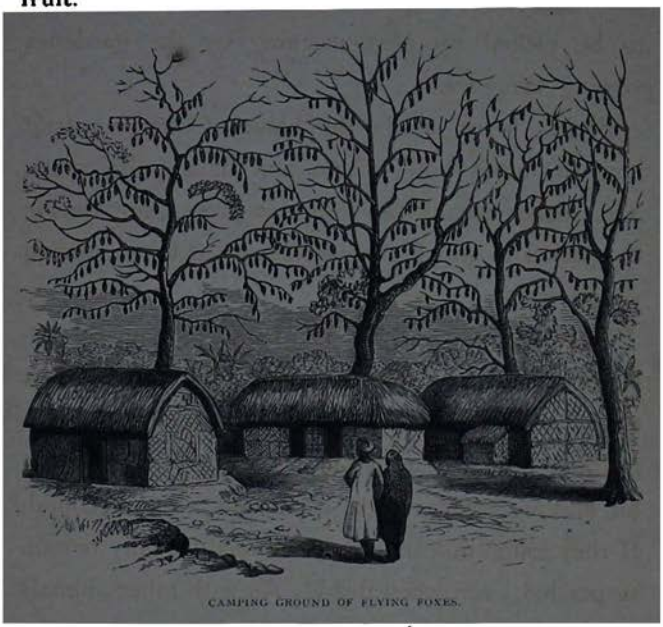
branches, drawing to his mouth, with the two hooks on the shoulders of his wings, any fruit within reach; then he will nibble at it, and probably bite through the stalk: the larger part will fall to the ground, to be picked up next morning by the gardener vowing vengeance.

Flying foxes are in the habit of carrying fruit long distances, both whole and in a pulpy state. The males usually carry on this proceeding during the period in which their wives are at home rearing young ones.

The gun is greatly in use to keep them off the fruit-gardens, and, when flying, they form a fair object even at night, which is their time of appearing. They readily fall even when very slightly hit, and are easily caught when once on the ground. If they lodge in a tree, they will occasionally remain suspended, even when dead. As with other animals that appear in the dark, it is very advantageous for the shooter to possess the knack of hitting by merely keeping his eye on the object, and not requiring to see the muzzle of his gun.

During the day they retire to some secluded place, where they rest, hanging head downwards from the branches of trees. They are said also to

inhabit caves, but that I have never seen; though frequently I can bear witness to clumps of trees being covered with them, as if with some large fruit.



CAMPING GROUND OF FLYING FOXES.

It is a curious sight to watch these thousands of animals rousing themselves towards sundown.

First commences and gradually increases a chattering and squeaking, which afterwards become almost deafening. Meanwhile, one by one they stretch their wings. Then a few try a flight; and

presently numbers are flying and flapping, at first round and about the trees, and finally off to their various feeding-grounds.

These bats are unable to take flight from the ground, and once there they are easily to be caught: they can go no pace, but invariably in a shuffling waddle make for a tree, which they ascend somewhat rapidly, and from which they throw themselves into the air.

CHAPTER XLIII.

HUNTING AND SHOOTING.

PLENTY OF BOTH.—CAMPING.—SHOOTING BY MOONLIGHT.—WAKING UP.—ROLLING UP.—TEA-TREE.—"POT" AND "FLYING" SHOTS.—VARIOUS GAME.—POINTERS.—SPANIELS.—RABBITS.—INVASION OF RATS.

WITH regard to hunting in Australia with dogs, we find the frequent running down of kangaroos, and the rarer spins after dingoes with hounds. A real pack is seldom met with, but now and then a squatter will keep three or four couple, which of course he hunts and manages himself. But there is another species of hunting, which in Australia may be continually enjoyed. There is splendid excitement to be had after cattle and after wild horses. The stock-horses on stations make the best possible mounts, more especially as they are wonderfully clever at getting over the very awkward country that has at times to be crossed.

Either hunting or shooting may always be obtained. As has already been mentioned, there are

plenty of birds for the gun to operate upon. One is usually obliged to ride after them, because of the long distances; besides which, the horse will carry not only ammunition, and such game as may be obtained, but also camping material, should a night or two "out" be contemplated.

CAMP AT NIGHT.

On such an occasion, arriving after sundown at a good camping-place, we take our saddles, &c., off, put hobbles and a bell on our horses, and let them go. Then we set to work and light a fire; then cut down a lot of saplings, with which we make a hut. One man gets up into a tree, and lops a lot of branches well supplied with leaves, with which

the other roofs a framework of saplings, slanting towards the fire.

Then we stand the billy close to the fire, and, as soon as the water boils, throw in a handful of tea, which is stirred with a stick and left to cool. After this the blankets are arranged, first strewing a lot of leaves down, and also grubbing a sort of hollow for the hipbone to lie in. By this time the tea is ready; we set to work with chunnucks of beef and bread, and soon allay our hunger. Then, having arranged the saddles and other appurtenances, we throw several logs on the fire, and start off with our guns by moonlight.

On one such occasion we went some way along the banks of the creek, and at last came to a flat, and here were arrested by the peculiar car, car, car, made by wood-ducks. So we watched, and presently spied some. Then we started towards them together, both ready to fire, only just moving, almost imperceptibly, like a pair of ghosts; keeping our barrels well up that the moon should not shine on them. Presently the ducks began to disappear into what we supposed to be the shade of some trees. We were some five minutes thus approaching them slowly. Around us were all sorts of noises going on. Little "flying

squirrels" fighting and squeaking, and rustling up in the leaves overhead; then every now and then a 'possum would make a curious sort of tremoloso grunt. Then we heard a thump, thump, thump, along the ground right up to us; then a wheeze, and away went a kangaroo-rat.

Proceeding for so long a time with scarce any motion made us both tickle in various parts; so, had anyone been watching, he would have seen first one hand creep cautiously up and gently rub a nose; then another slide slowly down and rub a knee, and so on. However, at last we got pretty close to the shade into which we supposed the ducks had retired. Then B. thought he saw one, and fired. We could hear ducks flying about in all directions, but could see none, and then we discovered that the supposed shade of trees was nothing more or less than a very deep gully.

On our way back by moonlight we went up to where we heard the bells on our horses, who had already strayed some little way, and turned them down close to the camp. Then we boiled some water, and with wine and sugar in it had some first-rate negus. Then taking off coats, boots, &c., we rolled ourselves up in our blankets. Every now and then

consciousness returned, as one or other would rouse out to pile up the fire, and so wake the other.

Towards daybreak a variety of curious rows began. Magpies were warbling and piping all round; parrots screeching and flying about in every direction; and continually were to be heard laughing jackasses answering from tree to tree.

There was a white frost over all, but thickest down by the creek. We lay enjoying the concert till the sun got up, and then proceeded to the water and had a bathe, though forced to lie on our backs to get wet all over.

A short way up the creek we found delicious clear water, and therewith filled our billy, carried it up to the camp, set it down to boil, and proceeded to roll up our blankets; also to get everything ready for breakfast and a start.

After a meal of beef, bread, and tea, off we walked with our bridles to where we heard our horses' bells, first put on the bridle, and then took off the hobbles—unlike the man who took off the hobbles first, upon which away dashed the horse, and he had to find his way back many weary miles on foot. Upon reaching the camp we packed, mounted, and rode to the deep gully where we

had been the night before, and on the opposite side of the creek saw two wood-ducks out on the grass, feeding; so we rode down to the junction of the creek with the river, and tied our horses to trees. Then B. crossed the creek, and took a long circuit to get the "pot" shot at the two ducks, whilst I stood behind a dead tree to get the "flying" shot. In one direction I enjoyed the pretty view up the creek, whose bush-grown bed wound its way between tree-covered slopes, whilst on the opposite hand lay a wilderness of rocks and trees in the bed of the river; and here we commenced a good day's shooting.

The rivers of the up-country, like the creeks, are mere long chains of water-holes, some of them over a mile in length. Then between, are wastes of rocks, thickly grown over with "tea-tree" scrub, swamp-oaks, and tall gum-trees, all more or less showing the marks of floods. Through these wastes run one or more slight streams, and pools abound on all hands.

There are various ways of shooting a river, but it is always best with two, and only two, men at the work. One starts, say, a quarter of a mile ahead of the other, and then each manages the

ducks the other puts up, whether by taking them flying, or marking them down; and they will often settle right close to him, if he, on hearing the other shoot, keep out of sight and watch. Another good plan is for one to "plant" some two or three miles up or down the river, having ridden thither over the country by a short cut; he should take the horses with him: and for the other to beat down towards him. He of course roams about in his immediate neighbourhood, and gets lots of flying shots caused by the other man working towards him.

When shooting creeks, it is well for the two men to ride single file as quietly as possible, along one bank of the creek, the leader keeping a sharp look-out. Immediately he spies ducks, he turns sharp off out of sight of them, and the other should follow him. Then one of the two rides off, cutting corners, &c., to join the creek again some way the other side of the ducks, and there he plants so as to command the creek. The other one, after tying up his horse, proceeds to sneak on the ducks, and thus gets the "pot" shot, while his mate gets the "flying" shot. For this sort of shooting, a good big single-barrel and a handy double-barrel are the most useful weapons.

A day's shooting in Australia is rarely confined to one species of bird or animal; duck, pigeon, quail, kangaroo, &c., all coming in for a share of the shot, and thus it is that a breech-loader is invaluable. Not only can it be carried empty, on the horse, thereby causing no risk of accidents, but it can be readily loaded for the occasion with small or large shot, &c. Cartridges can be got up from the larger towns in abundance, with the other stores.

Pointers or setters are of but little use up in the bush. Though of value after quail and snipe, they would so seldom be taken out, that they would probably quickly forget all previous training. A good retriever is by far the best dog. He should be able to work well both on land and in water; and his master, moreover, should be thoroughly competent to keep him well up to his work. If he were able on occasion to beat, as would be the case with a spaniel, he would be all that could be desired, as he would soon put up a quail, snipe, or duck in thick scrub, grass, or rushes. Dogs in good training are but seldom to be seen in Australia; and this is usually due to their masters' utter ignorance of how to keep them in proper order. One does indeed see well-bred dogs, retrievers and others,

probably once well broken in, but which have lost, or rather grown out of, all former good manners through not being practised therein.

Of wild animals introduced into Australia, the rabbit has gained most notoriety. It has in various parts become a great and important nuisance; and one hears of almost fabulous sums spent in clearing runs of them. In some districts report tells how their interminable burrowings put a stop to all horses passing over the land, by forming one series of pitfalls.

Their skins would be worth something, as the hair is valuable in the manufacture of felt, an industry which will doubtless ere long be thriving in Melbourne.

Every now and then in the local papers is advocated the manufacture of rabbit sausages for export. Doubtless, could their destruction be proved remunerative, so great a pest would rapidly disappear.

Norway rats are fast invading the land, and have already penetrated over one hundred miles inland from Sydney. Occasionally they arrive in townships far up country, safely ensconced in packing-cases, and then on their being roused out of their lodgings

a most exciting chase takes place, usually ending in the extermination of the fresh arrivals.

Partridges should do well in Australia, so far as climate and food are concerned; though they would have much to fight against in the shape of native cats and various rapacious birds.

CHAPTER XLIV.

MOAS AND WEEKAS.

ALL BIRDS AND FISH.—MOA EXTINCT SINCE 1400.—CROSS BETWEEN A SNIPE AND A MONKEY.—THE WOOD-HEN.—ITS THIEVISH PROPENSITIES.—ITS SLAUGHTER.—HOW TO CATCH IT.—IT IS A CANNIBAL.—"KAA-KAAS."—DUCKS.

OF all known countries, New Zealand must be allowed to be the most peculiar with regard to its indigenous inhabitants. Australia indeed boasts of the abnormal characteristics of her kangaroos and her platypi; but then the peculiar forms of her marsupials, aided indeed by her numerous birds and reptiles, do but enable her to possess the normal supply and distribution of animal life; whereas, in New Zealand, supply, distribution, and form are all abnormal.

There are at most, only one or possibly two specimens of mammals of any description; the birds are all of a most peculiar and individual character; and there is a total dearth of snakes of any size or description.

A doubtful rat, and a seldom-seen supposed-to-be otter, are all New Zealand can claim in the way of indigenous mammals.

Her birds are indeed curious. The huge Moa is by most people looked upon as a thing of the past, though some are disbelievers in the fact till all the country shall have been explored. It may here be remembered that a coot (*Notornis Mantelli*), "founded in the first instance on fossil remains, has since been discovered living in the Middle Island."

However, never have any very recent remains been found of the Moa, as surely there should have been had it existed at all lately.[1]

Again, the Maories know nothing of it; though that only proves its absence from since about A.D. 1400. However, its bones have been found associated with what are always held to be the cooking places of some old human inhabitants of the place. Certain it is, no race of men are at all likely to have thriven in a country in which there was nothing of any size, or substance, for food.

[1] Feathers, dried skin, and muscle prove nothing very recent, as they readily preserve themselves, under favourable conditions, for a very long time.

Supposing the islands to have been inhabited, Moas by all analogy should have existed, or in their place some beast or bird of size, whose remains, however, have not yet been met with. Of other birds, beasts, or fishes, there was nothing as large even as a goose, until Europeans introduced pigs.

The Moa was a bird of gigantic proportions, far exceeding in size any bird of the present time. In the Christchurch Museum is a most interesting and unique group of more or less complete skeletons of several species of this bird.

At present there exists a small representative of the Moa tribe, the "Kiwi" or Apteryx; a most remarkable looking bird, felicitously described by some wit as a cross between a snipe and a monkey. It has a long bill, but its body is covered with what much resembles long hair, and it has mere useless apologies for wings.

There are two remarkable birds of somewhat similar nature: the one, the "pukeko," a large species of quail equalling a pheasant in size. It is of a bright blue colour, and inhabits marshes and other wet places. On the table it is most delicious. The other is the "wood-hen" or "weeka," a bird which becomes an object of aversion to everyone

who has been in its neighbourhood but a few weeks. When seen tamely running about the scrubs, it would be readily mistaken for a hen pheasant, though the small size of its wings does not allow of its trusting itself in the air.

This peculiar bird abounds in the neighbourhood of all scrubs, and is particularly fond of haunting back doors, camping grounds, and other places, with the object of "lifting" any desirable article. It is particularly partial to pannikins, silver spoons, &c. But it remains a problem whether wood-hens understand the proper use of such articles; or, secondly, whether they use them for purposes of digestion as would an ostrich; or, thirdly, whether they take them home for their wives and daughters to reflect their charms in. Against the second theory stands the great size of the articles taken; and in favour of the last stands the fact that the more polished and shiny the article, the more is it desired.

Most houses are built in close proximity to a patch of scrub, in order that the supply of firewood may be handy. The domestic hens will persist in retiring into this for the purpose of laying eggs. The consequence is, that the wood-hens have a fine supply of eggs for food. Moreover, they will

hang about and watch these domestic hens, and surreptitiously abstract their chickens in a most amusing and cunning manner.

In consequence of these and many more their evil deeds, they have become loathsome in the eyes of all well-meaning men; and are on every possible occasion put an end to by every available means.

In spite of all this persecution, the wood-hen remains a remarkably unsuspicious bird, ever ready to pry closely into anything out of the common that may come within its observation. Thus you sit you down in a scrub, and presently one is sure to be with you. It utters a peculiar noise, not unlike the exaggerated beating of a human heart; and likewise has a shrieking cry very easy of imitation, and therefore of use in finding their whereabouts, for even a bad imitation is immediately answered from all sides.

The wood-hen will come prying and feeding about within a few feet, every now and then taking an inquisitive survey of you. At such a time they are easily caught alive by a simple Maori plan. From the end of a stick, several feet in length, is dangled something bright; spoon, red rag, &c. At this the weeka will soon peck. At the end of

another stick is made a noose of flax, and through this, when the pecker has placed his head, he finds it impossible to withdraw it.

Round the back door of a house it is as well to kill as many wood-hens as possible, in order, if not to exterminate, at all events to keep their

WOOD-HEN OR WEEKA.

numbers down as much as possible. A great many may be caught with the noose above mentioned, if the skinned corpse of one of their number be hung up. A crowd of birds will soon congregate round, pecking at it; and they may all be caught in succession: the cries of each captive, instead of warning off, bring fresh birds to the trap.

A very good plan to keep them at a distance from the house is to have several small dogs, with violent predilections for chasing and killing them.

Most of the islands of the Pacific have some large species of rail in their scrubs; the New Zealand representative being the obnoxious wood-hen.

The wild pigeon, common in New Zealand, is of immense size, and very stupid. It therefore affords but little sport, except when found feeding in "cabbage-trees;" and then it flies strong and well, and gives capital shooting.

There is another bird found about the scrubs, known as the "kaa-kaa;" in appearance it is half cockatoo and half parrot. It makes up a capital dish.

Ducks are plentiful in some parts, more especially one very large and curious species, known as the "mountain duck," which is easy of approach, being uncommonly stupid.

The increasing scarceness of quail is complained of on all hands.

CHAPTER XLV.

PIGS AND GAME.

PIGS EAT LAMBS.—TAIL, WORTH EIGHTEENPENCE.—BAILING UP PIGS.—CHARGES.—STABS FROM "SPANIARDS."—MOORS.—BLOW-FLIES.

IN New Zealand there are no animals, and but few birds, of prey. Consequently most introduced birds and animals have thriven marvellously.

The pig was found by the first settlers, in the beginning of this century, in large numbers, and already wild, in many parts of the country, although it had only been introduced by Captain Cook, and other early navigators.

It is, by many, believed to prey on young lambs, and is therefore warred against. It is still very common, inhabiting the thick scrubs, and feeding outside on fern-tree, and numerous other, roots. Great sport is to be had in its slaughter.

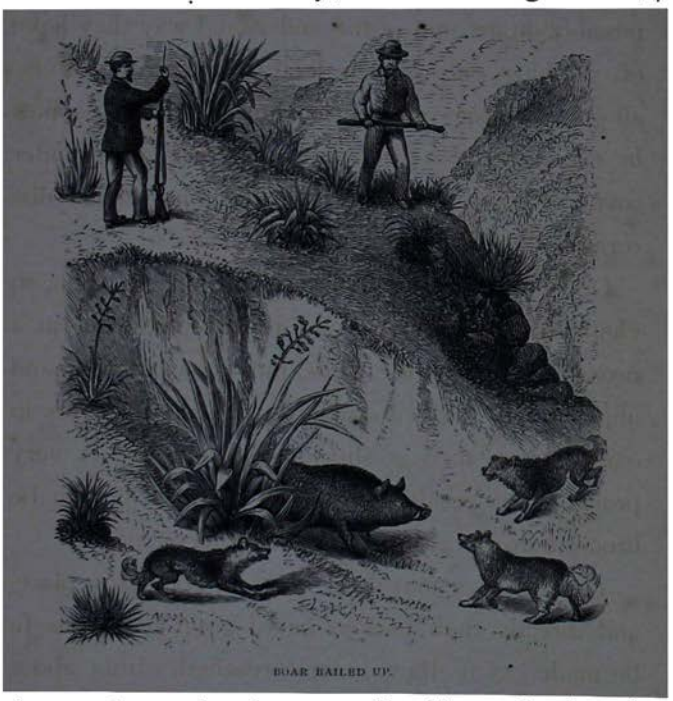
When the various diggings first attracted men,

pigs proved a wonderful source of profit in the way of supply of food to the diggers; but now the chief profit is to be obtained from certain squatters, who offer a shilling or eighteenpence for a tail, provided it once ornamented a pig running on their run.

Many a shepherd, in the wilder parts of a run, is thus enabled to add several pounds to his year's income. One had killed two hundred in four years. His work, up in the mountains, was to keep the boundary of the run; and so he used to go backwards and forwards along it, over ridges, through gullies, and all sorts of places more or less abounding with pigs. He would take three or four dogs with him, in order to turn back any sheep that might be feeding towards the boundary; and these dogs, if they came on the track of a pig, would soon bail him, or her, up. Then the beast was bowled over with a bullet, and its tail cut off; possibly the dogs would get a feed, or the haunches or liver would be taken home to be cooked and eaten.

Owing to the nature of the country, the pigs are only to be got at on foot. Two good dogs are used to find and bail him up; and he is then put an end to by means of a strong dog kept in hand for the purpose; or by the use of spears, or by aid of gun or pistol.

The best arm to use is a good revolver on a stock, inasmuch as it is easy of carriage, and likewise contains several bullets in case of the pigs charging. The boars frequently have very formidable tusks, and the sows bite severely; but a real charge is rare,



BOAR BAILED UP.

inasmuch as the dogs usually divert the beast's attention.

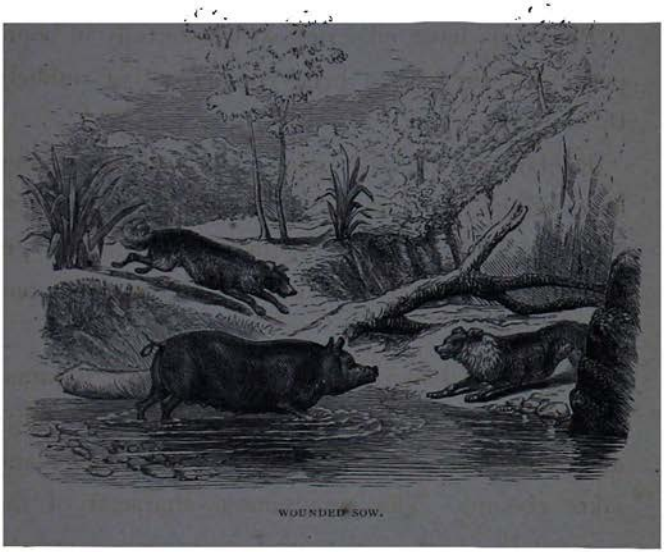
Going after them is tremendous hard work. They haunt gullies in mountainous places, and the sides

of these gullies are fearfully steep and covered with vigorous plants. Huge flax bushes and big "tussock grass" plants are of great use in enabling one to climb up or down; but there are some wonderful plants that go by the name of "Spaniards," possibly on account of the underhand way they have of stabbing one. Their long stiff narrow leaves, all growing from one centre, show sharp long spikes in every direction; and moreover they grow under cover of grass, &c., and thus are but seldom discernible.

One treads on a spaniard spike, springs back, so vigorous are the stabs, and probably clutches at a tussock, higher up the slope, but to have one's hand impaled by a hidden spaniard; the blood shivers in one's veins; then a slip down the slope is very probably the result, in which it is great luck to be brought up by anything but another spaniard.

The three or four dogs hunt all about the place, and directly their bark is heard great haste has to be made, as if they be not reached within about ten minutes, or a quarter of an hour, the pig, which till then had remained stationary, will begin to shift his ground, and thus, in all probability, get farther and farther from his pursuers. Very rarely the

pig has the good taste to travel towards the gun; but if he go in any other direction, his pace, though hampered by numerous short stoppages and rushes at the dogs, will still quite equal that of his human pursuers.



WOUNDED SOW.

Some of the climbs after pigs are extremely fatiguing, as one has continually to descend abruptly into deep scrubs, filling rocky gullies, and then on up the other side. However, as one nears the pig, all thoughts of fatigue and spaniards vanish, and great fun is enjoyed. Wild pigs are usually in good

condition, and their livers are capital, as are also the young suckers, often to be got.

Deer have been imported lately, and have thriven well. Nearly all the Middle Island much resembles the highland parts and moors of Scotland, though with a warmer climate.

Pheasants have increased so wonderfully in some parts that they have been complained of publicly by the farmers.

Rabbits are rapidly gaining the bad name they have already obtained in Australia. Doubtless grouse would do well, though they do not as yet appear to have been introduced. Hares thrive and increase.

Trout are doing well in some of the streams; they, however, will have to contend against large and voracious eels, with which the rivers and lakes abound. The mountainous character of the country, the vast glaciers and snow-capped ranges, afford splendid rivers and lakes for trout and cognate fish.

It would seem an oversight that the New Zealanders have not yet brought over from Australia the delicious Murray cod, which should do well in many of the rivers.

The vast moor-like lower ranges, and the fertile plains and valleys, untenanted by any hurtful birds or beasts, save wood-hens and a small species of hawk, offer splendid homes for deer, grouse, pheasants, hares, and partridges. And thus some day, not far distant, New Zealand may become the country of the world most blessed with all the sportsman can desire.

The most universal creature in New Zealand is the great blow-fly, celebrated for the rapidity with which he will spoil meat. On the most desolate mountains, down in the plains, about stations, in the thick scrubs, everywhere, one cannot sit to a meal without being visited by one or more of their tribe.

The little civilized English house-fly has however landed, and its refined and gentle presence is rapidly driving into the very wilds this noisy spoiler of meat.

In like manner does the bodily-weaker civilized man stamp out the great strong burly Maori.

DIVISION VI.

NATIVES AND CLIMATE.

CHAPTER XLVI.

ABORIGINALS.

TEST OF EDUCATION.—TAME BLACKS.—INDEPENDENCE.—GROG AND TOBACCO.—WORK FOR PLEASURE.—BLACK BOYS.—BORER.—FIRST BITES.—STARVING OR GORGED.

JUST now a great deal is being said and written about education: whether the mind of a boy is to be trained to its utmost capability of receiving and retaining knowledge; or whether, instead, his head is to be crammed with technical facts in one or two branches. Yet it is just probable that but few schoolboys in England, under whichever system they be brought up, could rightly answer the question—"What is the colour of an Australian native?"

It is a common crime with "new chums" to call the blacks "natives," thereby insulting many a true native within hearing: for be it known that blacks are "blacks," or more politely aboriginals, whereas "natives" are of good English stock, doing full

justice to their ancestors; and they are moreover proud of their title of *Natives.*

Of the Australian black there are now two varieties, which may be respectively named tame and wild. The former is that most frequently seen, and presents about the most wretched specimen of humanity, conceivable. One or two usually hang about townships, and are ever to be found somewhere near the public-house verandah. They dress up in all sorts of cast-off clothes, and are generally uncommonly dirty. Grog is their great idea; and on it they bestow the numerous sixpences or shillings they get thrown to them. If once the black gives up his health-giving outdoor life, and commences loafing about the more civilized parts, he is sure to die off rapidly.

Nearly every one of these hangers-on is troubled with a distressing cough, which is the result of their unhealthy life, undergoing all sorts of self-imposed privations: now, living too well and becoming intoxicated, then starving and wandering in search of food; all the time but half-clad, and yet imagining themselves as well off as the English, and so taking none of that trouble for their own well-being which they would do were they in the wilder state.

When in this half and half condition, they are about as lazy as it is well possible for man to be, and appear to care for nothing but food and lodging for the moment, and a smoke and a "nip" as frequently as they can get one.

They are very independent, and will but seldom do a stroke of work, unless under immediate promise of tobacco or other articles valuable in their eyes.

It is however curious that they actually do work well, when with parties bent on pleasure, and not on business. They are even hardworking out shooting or fishing in boats, &c.

Little black boys are frequently employed on stations; and then, if they take kindly to the place, they are of great use. They early manage to stick on the back of a horse, and are thus able to do much in the way of getting up horses from the paddock, and taking short messages. As they get older, they become invaluable as bush-riders, as they care for nothing, ride at anything, and apparently never get killed, even by the most crashing falls. At about sixteen years of age, they begin to get sulky, give back as good as they get, and finally bolt suddenly. They join some tribe that they have heard of in the

neighbourhood; and are made men of by passing through the mysteries of the "Borer."

The places used by the blacks for this ceremony are not at all uncommon. A circle some forty yards in diameter is surrounded by a mound of earth, through which there is one outlet by a trench, which runs in a straight line for sometimes more than a quarter of a mile. The trees all round about are usually carved and cut in the most extraordinary fashion. The chief visible result of the performance is the knocking out of two particular teeth, after which a black is considered of age, and immediately appropriates to himself a "gin" or wife; in fact, he becomes a man of the tribe, and no longer a child. It is noteworthy that all the black children appear to be greatly under the influence of the "gins," never daring to disobey them.

Being a man, he can now join in the hunting expeditions; moreover, he gets "first bites" at meals, for it is a custom of these gentry for the men to seat themselves, and gnaw at their food till satisfied, continually throwing half-picked bones, &c., over their shoulders to be scrambled for by the "gins," and the children, who in their turn pass them on in the same manner to the dogs.

Occasionally one meets with other works of blacks beside the Borer Camps. In certain rivers are to be seen vast chains of pools, all artificial, in which tribes of blacks have been wont to catch fish to supply any special gathering of the tribe, as for instance the festival of the Borer.

When in his wild state, the black is exceedingly active, and very sharp in all bush lore. It is thus that he is often of great use to those who are, for any purpose, actually in the wild parts. Steady and continuous work does not suit him at all; but he is very clever at getting hold of almost any sort of animal or bird; he is a great hand at "tracking," and is ever on the look-out for the tracks of everything, of which he takes notice apparently involuntarily.

The Aborigines of Australia are often described as the representatives of what are called "Austral negroes," in contradistinction to the "African negroes." They have not the latter's muscular strength or capability for labour; but all their senses are very acute, and in the wild state they are marvellously active.

The Austral negro is found in most of the eastern islands—the Andamans, New Caledonia, New Britain, New Guinea, &c.—though in the larger

islands he has been forced into the interior by the arrivals on the coasts of Dyaks, and Malays of various sorts.

His small numbers in Australia may be accounted for by the difficulty there existing of his easy obtainment of food and clothing. The Pachydermata and Ruminantia, the species of animal most useful to man, are entirely wanting. His rivers do not swarm with hippopotami, nor are his plains covered with deer, buffalo, elephant, or other large beasts. The kangaroo is all he has, and that requires a great deal of hunting, and is not of much bulk when obtained. Hence it is difficult for him to support a large family; and he has likewise no leisure time, the essential accompaniment of man's striving to improve his condition. He is either starving and hunting for food, or gorged to stupefaction.

When first encountered in the wild state, they are particularly partial to impaling white men's bodies with their long spears; but they are so sparsely scattered over the country that, after one or two palpable evidences of the superior power of the white man, they are forced to acknowledge his supremacy, which is usually backed up by the influence of a plentiful supply of tobacco.

CHAPTER XLVII.

NATIVES AND NEW CHUMS.

"CORNSTALKS."—AUSTRALIAN LANGUAGE.—IGNORANCE OF THE ENGLISH.—IGNORANCE OF THE AUSTRALIANS.—GREEN-HANDS.—BUSH EXPERIENCE.—EVERY MAN FOR HIS OWN.—THE BEST RIDERS IN THE WORLD.

AUSTRALIA now abounds with natives; and they certainly appear fully calculated to keep the country going and prosperous.

They have already taken to themselves a certain type: being usually of good height, but wanting in breadth and depth, they have gained for themselves the epithet of "cornstalks," which is saying a great deal for the value of their heads. Their hair is usually straight and of a lightish colour, and very frequently the complexion is freckled, with a ground of white instead of the pink or red usual, in such complexion, in England.

Australian language is chiefly noticeable for the general absence of all dialect. There being, out there, such a complete fusion of "tribes," it is pro-

bable that, for some time to come, the English of the present day will be spoken. In short, until districts are sufficiently settled to form their own dialects, the language will remain more as it is now in Australia than in England. Of course a certain number of peculiar words have crept in, among which may be noticed, *plant* for hide, *plum* for perfection, *bogie* for bath, and many others.

Natives speak slowly, and are uncommonly fond of taking life easily; though they show perhaps a more fiery nature than the typical Englishman. Most of them have had more or less bush experience, and are therefore first-rate in the saddle; but as the cities and civilized parts increase, so do town-bred native youths increase, who much resemble others of the same stamp elsewhere.

Australians often complain greatly of the ignorance shown by those in England concerning the ins and outs of their life, and especially the want of knowledge of the geography of their land, apparently ignoring the fact that a vast proportion of the people in England have nothing whatever to do with Australia, or even with any of the Colonies.

Of course people ought to be acquainted with the more important geographical points of all

countries in the world, but they are too apt to take real interest only in those with which they are more immediately connected, and to forget all they learned at school concerning other places. Indeed, as regards Australia, they would need fresh schooling every five years, so rapid is its growth and change.

I was much struck, in the midst of all these complaints, at specimens of like ignorance shown by Australians themselves.

Thus on one occasion it was impressed upon me, against all arguments, by an old colonist, that there were at present seven colonies in Australia, viz. Queensland, New South Wales, Gippsland, Victoria, South Australia, Western Australia, and Tasmania! Again, a well-educated young Australian, just entering on a profession, remarked, in perfect earnestness and good faith, that he supposed "Government House" in London must be a remarkably grand building.

Another native, of really good position, on my arrival in Australia from Otago, was positively astounded to hear that there were any human beings, but savages, in New Zealand.

Now that I am back in England, whilst talking with pleasure of my roamings in Australia, and

finding many anxious for any number of yarns, I find the great majority have but vague ideas concerning the place. Very few really are, or seem to think they would gain much by being, thoroughly acquainted with Australia. They probably never intend to have anything to do with the other side of the world, and find quite enough to do on this side; and so likewise, as Australia increases, there will come to be numbers there who will have but little interest in the affairs of the old country, beyond a certain wish to hear of its prosperity.

Verdant Green at Oxford and a new boy at school are traditionally looked upon as fit objects for every species of practical joke, but theirs is as nothing compared with the supposed greenness, on every possible subject, of a "new chum" in Australia.

It is often amusing, and certainly interesting, to see how he is looked down upon, aye even despised, by those who are supposed to have obtained what is commonly known as "Colonial experience."

Sailors are on all hands allowed to understand better than others the handling of ropes: in branding cattle, ropes are much used: a sailor, seeing the awkward way in which a man was handling the rope, changed places with him: he astonished and

delighted the two or three odd hands engaged in the job by the simple and ingenious way in which he worked the rope, doing it all with a marvellous saving of time. Unfortunately he was a "new chum," but just arrived on the station, probably not long before having deserted his ship. It was amusing to see the young "super" come up, in all his pride of being a good bushman, snatch the rope from the sailor's hands, explain to him the old, slow, clumsy way of doing the job, at the same time ordering him either to do it thus or let it alone.

Not many days after, the sailor's dodge was in general use among the men working at their yards, whenever the "super" was safely out of sight.

Any fresh arrival from England is apparently supposed by Colonials, more especially those in the farther bush, to know nothing whatever of anything that is met with up there. And in their opinion it would seem as if riders, horses, cattle, and sheep existed nowhere but in Australia, and often but in that particular part of Australia.

Certainly many young men arrive straight from London or other large towns, and are set down in the middle of the bush, among sheep, horses, and cattle, with which possibly they may have had no

further acquaintance than witnessing a dying cab-horse, and eating steaks or chops. On the other hand, an enormous proportion of home youth have, during their boyhood, had more or less experience in what in England is known as country life; they may be able to sit a horse, though only across stiff country after the hounds; and, moreover, they may be granted usually an average amount of wits.

But this faith in the supreme perfection of one's own surroundings, to the utter exclusion of all others, is the common lot of the descendants of Adam.

The test of all knowledge on the part of the squatter is a full acquaintance with sheep. A first-rate stockman utterly despises a sailor in the bush; but in a good gale at sea how little respect has the sailor out on the lee-earing for that great landlubber crouching on deck, seeking shelter from the sleet, even though he be able, in his own element, to wheel any mob of cattle in the roughest country imaginable.

Where are the best riders to be found? Go to an English hunting field—Englishmen tell you they are there; go to the prairies—the Indians carry off the palm. Who can ride like the Guachos of South

America? The Arabs in the desert, the native home of the horse, ridicule the idea of competition. Who can beat the Tartar Cossack? But turn to Australia, and you will learn that riding is done to perfection in that part of the globe alone.

In every country one soon becomes acquainted with the fact that that peculiar land surpasses all others. And bearing in mind this universal law, one can complacently listen to the extravagant praises given by each nation to its own productions. Indeed, were it not for the existence of this patriotic pride, all incentive would have been wanting for some of the greatest national achievements.

CHAPTER XLVIII.

CLIMATE.

INFLUENCE OF COMPOSITION OF SURFACE.—SYSTEMATIC REGISTRATION.—CHRISTMAS DAY.—"SOUTHERLY BUSTERS."—HURRICANE LANES.—NEVER-CONTENTEDNESS.—OCEAN, DESERT, OR FERTILE PLAINS.—COWS MAKE RIVERS.—ABUNDANCE OF AGRICULTURAL LAND.—ICE, SNOW, AND SLEET.

SCIENCE is striding on apace in working out meteorological laws. Though these discoveries prove the existence of grand general laws, they also prove unmistakably the extreme uncertainty of weather on the surface of the earth, it being there entirely under the influence of the various inequalities of that surface, and also more particularly of the different heat-retaining powers of the composition of parts of that surface. And this latter fact proves that man has the power to a certain extent of getting the better of "weather," if he do but properly know how to modify the composition of the surface.

As far as Australia is concerned, its climate may

be described as being much warmer and drier than that of England, and therefore, to a great extent, healthier, more especially for those injured by that of England; but it is liable to extremes both in temporary change and in seasons. Hitherto no regular registration of weather has been generally undertaken in Australia, and hence one has to trust to a variety of circumstantial evidence; among which figures largely that of personal recollections, always more or less vague and uncertain, also, moreover, subject to the imagination and prejudice of the oldest inhabitants and others.

Now, the various Governments are taking measures for the general and systematic registration of meteorological phenomena.

Concerning temporary changes it may be said that, though they are sudden and extreme, they are not so frequent as in England. However, they are well worthy of note.

In Sydney, for instance, may be said to blow three chief winds:—the north-easter, a relaxing sea-breeze, very grateful to some; the westerly, or hot wind; and the "southerly buster." Each of these winds has peculiar concomitant weather, the first and last bringing rain.

On one particular Christmas Day the hot wind blew, and the thermometer was at a very uncomfortable height, over 100° Fahrenheit; dinner came in the sweltering mid-day heat; roast beef and plum pudding were forced down the throats of the lightly-clad feasters, purely by means of that stubborn patriotic courage shown by Britishers at the Battle of Waterloo, and on several other eventful occasions. Of course second helps were out of the question, and all retired to the shady side of the house, and there lay panting in the verandah.

Drowsy, yet irritable, each one perceived that great changes had taken place in the sky during the heroic attack on the plum-pudding: an ominous calmness prevailed, and all was pitch and darkness to the southward. The heat, if possible, was more unendurable than ever.

Suddenly a low moaning is heard, and in a second each one has passed through two sensations: first a sense of delightful refreshing coolness; then, as suddenly, that of a sickly shivering chill: dust and leaves are blown about and eddy in the corners, and before everyone has well risen from their reclinings, rain and wind are driving past with irresistible fury. A rush is made to the thermometer: it stands now

at 60°,—a fall of 40 degrees in a few minutes! and all hasten within and gladly don their tweeds and cloths.

Thus was experienced the theoretical Christmas Day of Australia until two o'clock, and after that hour a not unfrequent English one; the wind at the temperature of 55°, after the heat of the morning, feeling as cold and chilly as though laden with the sleet and ice of all the Antarctic regions.

"Southerly busters" are however not always thus accompanied by rain; occasionally they appear as "brick-fielders," and are in that case by no means so cold, though very disagreeable, inasmuch as they become dust storms, frequently driving along such thick clouds as to render the other side of the street invisible. "Southerly busters" always come on suddenly, though their arrival can be easily foretold after a little experience in the matter.

Up in the interior, when travelling through the bush, one frequently comes upon absolute lanes, which can be followed up for miles, cut by violent local hurricanes; these lanes are generally the same width for the whole distance. The trees also, torn up by the roots, all lie in the same direction: with very little trouble these masses of fallen timber could

be converted, if required, into a rough fence. These lanes by no means aid locomotion, for though the space certainly has no trees standing upon it, yet their fallen position utterly stops traffic of every kind: they afford splendid stores of firewood for campers out.

Δειλοὶ βροτοί, but more especially those of the British race, are cursed (?) with a perpetual state of never-contentedness; and so, in Australia, whatever be the weather, some other is usually desired: during seasons of drought, people wish the everlasting sunshine would leave off, and long for clouds to shut out the staring blue sky. "It never rains but it floods," to pervert an old saying. And thus Australians will be seen on one point to have some sort of an excuse for this discontentedness. The irregular extremes of the Australian seasons form one of the peculiar features of the country, and no doubt, when the lately introduced registration of the weather has afforded sufficient data, some important facts will be deduced concerning the causes.

The early explorers had great difficulties to contend with, owing to this peculiarity. It often rendered two accounts of the same locality, possibly

visited at the same season but in different years, unaccountably at variance with each other. Frequently, more especially towards the interior, dry years follow one another for some time, and then the country has a very different aspect to that which it presents after a succession of wet years.

One exploring party penetrated inland, till they came to an apparently interminable sea, a vast expanse of water, beyond which appeared to exist nothing but water: being wholly unprepared for the exigencies of navigation, they carefully surveyed the shores and returned. Afterwards, another party was organized to start for the inland sea, taking with them well-arranged boats wherewith to explore the huge lake. They, at the same time of year, arrive at the exact spot which their predecessors had described as the shore of a sea, and find it the edge of vast arid plains: so they leave the boats, and proceed to cross and explore the plains. They suffer great privations, and are eventually compelled to beat a disastrous retreat, entirely owing to the want of water over that very district, from which others had been driven by its superabundance. At the present moment those very plains are covered with flocks and herds, and provide some of the

best fattening country in New South Wales, provided there be no long continuance of either drought or floods.

The chief complaint of Australia is the want of moisture to keep the grass from being burnt up.

Now it is a well-known fact, that considerably more rain falls in Australia than in England; but, owing to its coming only in large quantities and seldom, it has by no means the beneficent effect it would have, if it fell over more extended periods and not so heavily. Moreover, when it does fall, owing to the heat-hardened nature of the earth, a large proportion of it runs off, cutting up the country, swelling the creeks, and finally flooding the rivers, and so becoming lost in the sea.

In connection with this a curious fact may be mentioned, which has often occurred in the experience of squatters and others living in the bush.

All stock is wont to make tracks, whether to watering-places or over rough country: these tracks are soon worn deep by continual traversing of beasts in single file. Heavy rains quickly convert these tracks into gullies; gullies rapidly become creeks; and creeks grow into rivers: and thus a most effectual, though not always desirable, drainage is given

to the land. In swamps or other low lands it is invaluable; but on mountainous tracts and other high lands, it stands greatly in the way of any good that the rain might otherwise accomplish.

There exists a popular fallacy that, immediately the coastland be left, there is but little agricultural land towards the interior. This fallacy is entirely created by the uncertain extremes of the seasons. Explorers travelling overland after long droughts, marked their maps all over with "arid deserts," "stony wastes," "no grass or water," &c., &c. Now, if we take up one of these earlier maps, we find these "arid wastes" marked, where now flourish great agricultural districts. The fact of the matter is, that as fast as the white man has yet pushed his way, he has found plenty of good agricultural soil; but this same soil during the long droughts is anything but inviting to the farmer.

One hears much of the heat of Australia, but very little of the cold up in the interior: I have literally had to break the ice in a creek to get water for the breakfast "billy." Moreover, in some parts snow falls occasionally, and sleet is by no means uncommon.

CHAPTER XLIX.

AMELIORATION OF CLIMATE.

BLACK SOIL.—HOW SAPLINGS CAME.—DAMMING.—WELLS.—STORAGE OF WATER.—EFFECT OF TREES.—THEIR GREAT USE.—CORK AND OLIVES.—PINES AND SWAMPS.—IRRIGATION.

A COUNTRY the enormous size of Australia must necessarily present enormous diversities in its physical characteristics.

In some parts are vast trackless plains, perfectly flat, often composed of "black soil," a rich alluvial deposit which affords most luxuriant pasturage in favourable seasons; but it is particularly liable to be burnt up on the least continuance of drought: moreover, it very rapidly becomes swampy and flooded in rainy weather. These plains are often treeless and stoneless; even pebbles are scarcely to be found.

A great proportion of the country is well wooded. There are mountainous highlands one mass of trees and rocks; there are vast, gently undulating districts

thickly overgrown with trees, whilst in other parts abound dense copses of saplings.

It is affirmed by old squatters that when first they took up their runs the country was open or park-like, with fine big trees more or less isolated, and very few young ones. But that since sheep have been there, saplings have appeared in all directions, and this they suppose to be caused by the sheep treading in and manuring the seeds, which would otherwise generally be scorched up by the sun, and washed away into the creeks by the heavy rains.

Those districts which are comparatively elevated above the level of the sea are usually the best watered, though occasionally they get a little too much.

All the rivers and creeks during the dry seasons are cut up into pools, or water-holes, often of a goodly size; and with but little labour and expense, reservoirs of water can be established, by damming up creeks, &c., on many parts of almost any run: but squatters do not like making such improvements when they are likely to be turned out of their possession, and when any man may come and "select" land round the reservoir and use up the water. Of this more hereafter.

Wells are seen in some districts, but they of course necessitate a great deal of labour to bring the water to the surface. Artesian wells ought to be of great benefit, but are not yet in general use. There are plenty of methods for getting at, and keeping, the plentiful supply of water which now runs waste in Australia, if only they were adopted. But squatters are not likely to spend money in the improvements of their runs, knowing that at any time they may lose the benefit of all their labours. Irrigation pays well for all purposes of agriculture, and in such districts as that of the Hunter River its beneficial effect may be seen. Doubtless, when agriculture shall irrigate large portions of the interior, then the whole country will change, and the climate will probably be considerably improved.

Great things may be accomplished by the storage of water, and it seems to those at a distance strange that the various Governments should not work hard to get the squatters to stock their runs with water. The fearful effects of drought would in a measure be warded off, and the runs themselves would become much more valuable. Many a squatter would gladly improve his run, if he were aided by the Government, simply so far as to allow him to

reap the benefit of his own improvements. Although a squatter cannot attempt the thorough irrigation of his run, thereby to obtain abundant grass, nevertheless by storage of water he can at least secure enough for all his animals to drink, which is at present by no means the case.

The best practicable method of obtaining good grass is by means of trees; their effect on the fertility of countries is no longer matter of theory. There are now instances without end, of the beneficial effects of planting, and of the disastrous effects of destroying trees. A great deal of evil has been caused in many countries by such indiscriminate destruction.

The sun is known greatly to improve the qualities of grass; but one may have too much of a good thing. The scorching sun of Australia quickly sucks every drop of moisture from the earth, and reduces good soil to a loose powder, fit only to be washed away by the rain. Trees, beyond their powers of attracting rain, are perhaps chiefly valuable for their utility in managing a supply of water.

When too much rain falls, they exert the utmost powers of their roots to suck it up and stow it

away, at the same time tending greatly to preserve the soil from being swept off. Again, when too little falls, they stand greatly in the way of excessive evaporation, by keeping off the sun's rays from the earth, besides giving out such water as they have collected.

Enough trees should exist to attract rain, to preserve the soil from being washed away, and to grant a certain amount of shade. At the same time plenty of room should be left for the sun and air to have their due effect in sweetening the grass.

Gum-trees should be left standing in clumps, for if isolated they pine and die. All saplings should be cleared away—in a word, the country should resemble a gentleman's park in England, rather thickly wooded. Where trees do not already exist they should be planted, and then, if the right sorts be introduced, a great deal is gained.

Spain and Portugal are pretty well barren of trees in most parts, yet two of their great exports come from the few trees they have left themselves, viz. cork and olives.

These two trees would stand well the climate of Australia, and, though possibly not of quick growth, would become very profitable when of any size.

The Spanish chestnut is another useful species. Many others might be planted of great value for timber. In the south of France pines have been found to have the peculiar effect of drying up swamps, so perhaps they might be equally employed in some parts of Australia. The shores of the lake at Ballarat would appear good ground for the experiment.

Australians, when on their trips home, would do well to pay a visit to the great irrigation works in India, Spain, and the higher valleys of the Alps, &c.

They would thus return with due appreciation of the extraordinary powers of an efficient, though cheap, system of irrigation in improving the value and capabilities of land.

DIVISION VII.

POLITICAL FEATURES.

CHAPTER L.

PRESENT CONDITION OF LABOUR.

ORIGIN OF COLONIES.—VAST CAPABILITIES OF AUSTRALIA.—WANT OF POPULATION.—"BUSY TIMES."—GOLD.—UNSETTLED NATURES.—KNOCKING DOWN A "PILE."—INVESTMENTS FOR BUSHMEN.—SUDDEN FORTUNES.—RICH AUSTRALIANS.—"UNEMPLOYED."

IN accordance with the well-known law, that in prosperous nations the births will be always far in excess of the deaths, any territorial limits allotted to such nations must perforce soon become too crowded. It has therefore been found necessary, in all ages, for the surplus of population to leave the old districts and seek breathing-room in other lands.

And thus we see the origin of Colonies. When Greeks began to feel want of room at Athens or Sparta, away they went to Italy; crowded Rome soon found space for her citizens in other countries, which often were found already occupied by more or less barbarous nations. These, however, were unable to gain the same amount of advantage from

the land as were the more civilized intruders, and accordingly they rapidly disappeared before them; and so has it been ever since—New Zealand affording the most recent instance. The more civilized people, armed with its civilization alone, is sure finally to gain possession of the land.

The vast island of Australia is now in the hands of the English, and, as a glance at the map will show, a country of such proportions, when fully peopled, must play an important *rôle* in the history of the world.

It is a country of particularly grand resources. Its climate is certainly extreme and violent, but the battling against it, and final victory, is to be looked upon as one of the greatest assistants to the formation of the character of the future Australian people. A nation cradled and nurtured in unobstructed prosperity can never reach a vigorous manhood.

Doubtless, when large tracts of the interior shall by irrigation and other means resemble any of the more populated districts, such as that of the Hunter River, the climate will be found to be considerably modified.

The whole island of Australia, then, to be made

the thriving home of a prosperous and powerful nation, only requires population to turn its wildernesses into fruitful plains.

For half a century has this work of populating been in progress. The coasts have become more or less settled, and wonderful has been the rapid success of the coast colonies; such success being an earnest of what may be expected from the colonization of the whole. The settlements dotted along the coast are gradually extending in the direction of the interior, their strides thitherward being regulated in pace according to the increase of population; the greater the increase the greater the pace: but the greater the population the greater the increase; therefore, the greater the population the greater the pace; or, in other words, fill Australia with people, and her magnificent resources will be the more rapidly unfolded.

Before going into the question as to how Australia should be filled with people, the present state of affairs there claims our attention. Hiring all the year through, as a rule, obtains only in the more settled districts, and they are of course as yet but of small extent. Throughout the vast tracts of country at present taken up by the

"wool-growers," most men trust to the "busy times" for the equivalent of a whole year's wages. The multitudes of "swagmen," or bushmen, wandering about the country, will do as little as possible for a living, the greater part of the year. They will now and then hire at a station for some species of work, probably at very low wages; their chief object being the obtainment of board and lodging. They will often enter into small contracts with squatters, to supply them with a certain number of posts and rails for fencing, sheets of bark for roofing, &c. They live away in some part of the bush while doing the job, and just manage to make a little money by it.

Often they will wander from station to station, getting lodging and food gratis as they go along; in short, living on the squatters. Of course they will always declare they are in want of work, but usually raise some insuperable objection when likely to be engaged. In short, their whole object and aim is to keep themselves fed and lodged at the least possible expenditure of labour on their part, till "busy times."

Large numbers of men are required on all stations for the various operations of lambing, washing,

shearing, and packing the wool of sheep; and again, many, such as are good riders, are required for the annual mustering of cattle.

These operations are carried on at different times on different stations, and for various reasons. The warmer the climate, whether on account of latitude or altitude above the sea, the earlier the shearing; and thus a man can attend several in succession, making his "pile" at each.

Again, gold has much the same effect on the labouring man as "busy times." Many will be found holding a firm belief, filled with a sure presentiment, that there exists a large nugget waiting for them somewhere.

And thus a man will live on, now at the gold-fields, now wandering about the bush, until his whole nature becomes unsettled, and he can never more force himself to stick to any steady work.

Moreover, at first the amount of gold he finds, or the cheque he earns at shearing, &c., is probably but small. He sees others around him, older hands in the work, making three or four times as much. A sort of notion gets the better of him that what he has earned is as nothing to what he can easily earn afterwards. Therefore, he spends it after the

fashion of his more experienced mates; that is, he retires to the nearest public, hands his cheque over to the landlord, bidding him tell him when all is finished. He will then live there, probably, continuously more or less drunk, and in that state forcing all who enter to drink at his expense. But little of the money is taken out in food. When all is spent the landlord informs the man, who leaves contentedly; and should he carry with him a bottle of grog, handed to him at the last moment by the host, he will sing said landlord's praises all over the country.

It is this receiving large sums of money "all of a heap" that makes him lose it all.

It is evident that great good is to be accomplished among bushmen, could they but be persuaded to put the greater part of such sums into safe keeping. They could even get as gloriously drunk on a very small portion, would leave the public with the same empty pockets, but at the end of a few years would have belonging to them a nice sum of money for investment in land, or in bullock-drays wherewith to ply as carriers.

That such success for them is easily obtainable is clearly shown in well-known instances of bushmen

of all sorts settled comfortably, with a small patch of land, where lives the wife with the children, while the fathers and elder sons take drays up and down the country, carrying down loads of wool, and bringing up the large quantities of stores required by squatters, and by those living in the little townships,—storekeepers, publicans, and others.

With many, the fact of going out to Australia is believed to be synonymous with making a fortune.

The evils caused by the "busy times" and by gold, are largely supplemented by the idea so strangely fixed in the minds of most immigrants, that they arrive in Australia to live in clover, with but little work, standing a great chance, the while, of somehow or another tumbling into a goodly fortune, even though at home they may have been barely capable of earning their daily bread.

All this arises from the fact that, in the earlier days of settlement, men did frequently become suddenly possessed of great riches without effort on their own part.

When wool was high and mutton of great value, the squatter could not help growing very rich on the natural and inevitable increase of his sheep.

A man labouring away on a small piece of land,

cut off from all others, at the head of a large bay, is all of a sudden surrounded by ships and people, hears great talk of gold on all sides, and is abruptly offered fabulous prices for his land. In a few months he is raised from being a hardworking labouring man to an owner of hundreds of thousands of pounds.

The digger, plodding on at the diggings, one day, perhaps, smashes his pick against some unexpected hard substance, which probably gets sworn at, but which, when turned out, proves to be a large lump of gold, rendering him in a day master of several thousand pounds. And so on with innumerable instances.

A great many men were thus made suddenly wealthy in former times, and immediately flew off to England. There, their ungovernable enjoyment of everything, their total inability to manage unaccustomed expenditure of large sums of money, rendered them an easy prey for that large class of people in Europe ever on the look-out to relieve others of coin.

Thus these men lived at an enormous rate in England, their principal being used up in a few years. A man with, say, £100,000 would probably

live up to £30,000 a year; four-in-hands, yachts, moors, salmon fishing, and every species of expenditure; the whole largely supplemented by betting, and occasionally by extravagant gambling. However, the outside world will look upon him as an Australian with £30,000 a year. People will never inquire whether he be spending his principal or his interest. And when he disappears, he will not be missed. All that will remain of him will be another fact, in evidence of the wealth to be made in Australia; "and by *such* a man too! If *he* could so succeed, what would not our Samuel achieve!"

Occasionally in the capitals of the various colonies, some stir is made by bodies of men describing themselves as "unemployed," who usually petition Government against immigration.

They will gain an interview with one of the Ministers, who, after listening to a long rigmarole about their inability to obtain labour, and their present starving condition, will offer employment on certain public works, roads, &c., in return for which he proposes to give food and moderate pay.

These men, who have described themselves as "positively without any means of even allaying

the cravings of hunger," instead of jumping at an offer not only of food, but of a small sum besides (which would amply pay for tobacco)—slink away and disappear with their complaints till it suits them to break out again: the truth of the matter being that they have usually some plan in hand; very often their object is to be conveyed gratis to some neighbouring colony, where labour at the time is much required.

These unemployed are only to be found in the capitals; the whole of the remainder of each colony suffering greatly from want of labour.

If it is reported that, say, the harvest cannot be got in for want of labour, that men are being sought out at £3 per week, then probably a lot of men in a neighbouring colony knock off work at £1 a week, and by joining an "unemployed" demonstration, hope to be conveyed free of charge to the £3 harvest: quite forgetting that even should their own Government consent thus to bleed itself by letting go its population, their arrival would most certainly cause a great fall in wages, and that probably, after all, in the end they would receive no more than they had given up before all their trouble.

CHAPTER LI.

BENEFITS OF EMIGRATION.

MANUFACTORIES.—WANT OF LABOUR.—SLAVERY.—BLACK LABOUR.—MUTUAL GOOD.—COLONIES FOR EMIGRANTS.—EMIGRANTS USEFUL TO ALL.—AUSTRALIAN NEWSPAPERS WANTED.—EMIGRANTS' IDEAS.

THE extent of the industries already in existence is capable of supporting much more labour than is at present supplied, but influx of population to any amount will be successful, inasmuch as the industries are capable of huge extension.

Large manufactories require large populations to work them; large populations require large amounts of food; and large amounts of food require large numbers of producers. The vast dairy-farm districts of Cornwall thrive by supplying the manufacturing districts of Lancashire with butter. Important manufacturing districts would render necessary, extensive pastoral and agricultural districts.

Meat preserving, sugar making, wine growing, will all doubtless assume large proportions. There are many minor industries one wonders are not already in larger existence; tobacco, dried fruits, cotton, coffee, and endless other productions, which will doubtless thrive when increase of population causes men to look round for new openings. Why should all Australian wool be packed off to Europe? A beginning has already been made in the manufacture of woollen cloth, and doubtless ere long wool will leave Australia as blankets and broad cloth, and not in the raw state.

Australia's wealth in minerals will ultimately cause the formation of "black-countries," and other interesting places where much money is made and spent.

In short, the want of Australia is—more available labour; to cause the existing germs of various industries to thrive, expand, and grow, until they overspread the land.

In the more tropical parts of Australia black labour is much required. The white man cannot stand the climate; and his strength and intelligence are moreover wasted on the trivial, tedi us, and machine-like work necessary in the various planta-

tions. Coolies from India should here succeed as they do in the West Indies.

The introduction of South Sea Islanders as labourers is likely to answer: though at first an alarm of slavery was raised, and the opportunity was made the most of; indeed, there appears to have been some foundation for the report that there did exist a certain amount of, to say the least, misunderstanding between the natives hired and those hiring them.

Slavery has been abolished everywhere. Yet there still exist men who have spent much of their past time advocating its abolishment, and who, now that their aim is accomplished (possibly mainly by others), find no use for all their energy and devotion to this one particular cause. To such persons the Polynesian-Islander question has afforded new scope for their unemployed zeal. They have taken up their positions on one extreme, and will act as a useful drag to prevent the whole from rushing to the other extreme. However, they belong to a section in the old country always ready to make some noise, and so we must be chary of giving them too much attention. There is no similar society or clique in England to support

poor Queensland. We only hear one side of the question, and that we certainly hear to the full. One or two facts are brought forward in support of the statement that Slavery is again rearing her head in the Pacific, and we hear nothing of any other facts. For instance, we are never told how a supposed Polynesian slaver having been captured and brought into Sydney, the case was minutely gone into, and the vessel and crew triumphantly acquitted.

There are plenty of kindly people in England, full of leisure, only too glad and eager to rally round a cry of war against the slave trade. They attend a meeting, hear one single story or anecdote, form all their opinions from that, address excited speeches to one another, and rush off to petition Government, which, being aware of some facts on the other side, is obstinately slow at rushing off in the same chorus.

The principle of Polynesian labourers is an excellent one, but of course must be carried out in a thoroughly honest manner. There are many who appear to be unable to see any difference between black labour and slavery; who, when they are told that the Polynesian native is of vast benefit

to Queensland, immediately exclaim, "Oh, that's the old excuse over again. If you Queenslanders can't grow sugar without slaves, then you'd better not grow sugar at all." They still blindly see no difference between black labour and slave labour. A philanthropic idea, admirable indeed in itself, runs away with their judgment before it has had time to discover and grasp the true facts of the case.

The Queensland Government has made very good regulations on the subject. A Polynesian voluntarily hires himself for a certain period, for certain wages, to serve a certain person; after which he is safely returned to his own land.

This agreement, if made perfectly intelligible to the Islander, and, moreover, strictly carried out under the supervision of the Government, is all that can be desired.

Such an agreement is mutually advantageous. The North Australian is enabled, through cheap and suitable labour, to grow and export various tropical products at a good profit; the heat of the climate and peculiar nature of the work enabling the black labourer to drive European labour out of the market.

The Islander is safely sent back to his native land, there to describe how life is lived in civilized nations; consequently becoming highly instrumental in the ultimate civilization of his own; and, probably, if he have been treated aright, causing numbers of his countrymen to follow in his steps, thus keeping up a supply of labour so welcome to the Queenslander.

Concerning emigration, it is evident that when England's population over abounds, it behoves her to provide an outlet for her surplus sons, and for them her Colonies form the legitimate goal. Their prosperity is intimately connected with that of the old country; and the old country can be of special service by supplying the Colonies with people.

Those who emigrate appear at first sight to rob the old country of population, wealth, and skill; but such, on further consideration, is found to be by no means the case, inasmuch as the improved condition of the emigrant, when in the Colonies, renders him a far more powerful encourager of trade.

He then not only directly requires stores of various kinds from England, and likewise a large carrying trade to convey them, but indirectly, from

his increase, springs into existence a mass of people in a distant land, multiplying the wants from the old country, thereby opening up a huge market, which, but for his emigration, would never have existed.

It therefore becomes the policy of the Home Government materially to encourage this method of relieving the old country, to the great benefit of the emigrant, the merchant, the speculator, and of labour of every class.

All that is expected, in return, from the emigrant, is simply that he strive his utmost to better his own condition; no very hard terms, one would think.

The United States, for probably no other substantial superiority than their proximity to Europe, prove an attraction greatly in the way of emigration to the distant Antipodes. But then they make the most of this proximity. They uphold pushing and energetic agents in all nooks and corners of Europe.

Land in some small port—for instance, Gothenburg in Sweden—and there stares one in the face, the huge placard of the American Emigration Agency. If a native of any European country decide on emigration, he must perforce go to the

United States, as being probably the only New Land whose charms have been brought under his notice; —to him, emigration is but another name for settlement in the United States.

Both Colonial and Imperial Governments should lustily combine to get all emigrants to land in our own Colonies.

Each individual Colony, however, by greedily pushing its own interests in the matter, will tend greatly to the general success.

Not only in England, but throughout the many overstocked portions of Europe, Australians should spread broadcast information concerning their country.

In England, and probably abroad likewise, a great deal would be effected by the circulation of Australian newspapers, above all those published up country. The working man in his club would search on the map for Tamworth, Bathurst, Hamilton, &c., whilst holding in his hand its respective *Examiner*, *Herald*, or *Times;* and then, with the help of the paper, he would learn a vast deal concerning the state and condition of the interior.

Even the very fact of there being a paper published at all is significant.

Advertisements; the Reports of Municipal Councils; "his Worship the Mayor;" the "Lord Bishop;" the interesting leading articles; would all show and prove to him that, after landing in Australia, and leaving behind him the larger seaports and making for the interior, he would still be amongst kindred—that he would not be setting down his family in uncivilized wilds.

Emigrants often start for a new country without any clear or definite notion of what they are to do there. They become despondent and dissatisfied with their condition at home, and so leave for a new country, imagining that there all will be easy and luxurious; quite oblivious of the fact that, if they are to succeed, they will have to work quite as hard as at home, though at the same time the work done will be more profitable.

Emigration is now gaining much more attention than hitherto, and doubtless all possible means will soon be taken, by those interested, not only to inform everybody concerning the ways and means of living in Australia, but likewise of the ways and means of getting thither.

CHAPTER LII.

ADVICE TO EMIGRANTS.

WHAT TO DO UP COUNTRY.—THE LABOURING MAN.—INFORMATION WANTED IN NEWSPAPERS.—ANSWERS ALWAYS ONE-SIDED.—COLONIES ALL MUCH THE SAME WITH REGARD TO LIFE.—LONG VOYAGES VERY DESIRABLE.—BUSH DIFFERENT FROM OLD COUNTRY.—SQUATTER'S LIFE.—WHEN TO INVEST.—ADVISERS.—LOOKING ROUND.—WHAT TO DO WITHOUT CAPITAL.—LADIES IN THE BUSH.—NE'ER-DO-WEELS GIVE BAD ACCOUNTS.—FAILURES MAKE MUCH NOISE.—MODERATE SUCCESSES ARE NOT HEARD OF.

FOR those with capital in money there are endless opportunities for investment, whether in concerns under the skilled management of others, or under their own supervision.

For those without this capital, but who are willing to work, means of living in the larger towns are similar to means of living in England. In the bush, however, wages are higher, and living just as comfortable. More particularly for the sons of the educated classes, especially if they be unable to stand the hard work of the desk or the boisterous climate of the old country, the bush is the place;

of course supposing them willing to turn their hands to anything. There, without capital, if they can get on a station, they will receive for seven or eight years from £60 up to £90 or £100 per annum. Then they may possibly get the management of some station at a salary of three, four, or five hundred a year. It must be remembered that their expenses are nearly nothing: of course much depends on whom they are with, but on almost all stations the living is as good as it would be in any country.

Then the matter of clothing is very simple; just a "swell" suit for the rare festivities, and, for every-day dress, breeches, boots, old coat and old hat—all of which last pretty well for ever. There is no means of spending money save in the rare visits to townships; but on these visits a great deal is often spent, sometimes the greater part of a year's income.

The labouring man, on going up country, when hired will, besides his pay, receive his food, good sound mutton and beef (and plenty of it), flour, tea and sugar, and he will have his hut to live in, and be able to make his own garden, &c. In fact, his only expenses will be dress, and any little luxuries

he may consider necessary in the shape of pickles, sardines, and other preserved delicacies, always to be had at the station store.

Certainly, the outside appearance of the huts must rather astonish fresh arrivals from some neat English cottage; but the interiors will be found by no means uncomfortable, though rather of the rough.

"Good sprees," a convertible term for very irrational enjoyment, generally run away with an extraordinary deal of money; though short and inexpensive sprees are considered quite as effective in supporting the status of a man amongst his equals.

Newspapers are essentially a reflex of the ideas of a nation.

The news, leaders, information, and correspondence—everything indeed in them—appears solely in order to satisfy a public demand. When we see minute particulars and long letters on colonial life, it proves the existence of a genuine public want of information on that subject, which is usually introduced under some such heading as

WHERE TO EMIGRATE TO.

The questions are probably set by two main classes of persons: firstly, married couples; secondly, single men.

Again, we may divide the views of the married couples into classes emigrating with very diverse aims, ranging from, for instance, those of the artisan to those of the retired Queen's officer.

A great deal of valuable information is liberally given by correspondents in the papers, notably in the *Field*.

This evidence, however, requires careful sifting. It will be observed that each correspondent, as a rule, either vigorously upholds or as vigorously abuses some one place. Very frequently, too, not content with upholding one, he will abuse all others. We are sorely tempted to consider such very strong abuse as the letting off of the disgust generated by failure.

These strangely conflicting accounts must be most puzzling to those on the anxious look-out for a new home. The true state of the case is that all the Colonies, once the more settled portions be left, afford very much the same style of life. It matters little whether the energies are devoted to farming in America, coffee-planting in Ceylon, breeding ostriches at the Cape, growing wool in Australia—all alike need for their successful cultivation a certain amount of rude health,

and as large a stock as possible of perseverance and spirit.

Sheep-farming, however, is a peculiar industry in itself. Squatters form the highest class, the aristocracy of Australia and New Zealand; and for a gentleman in England who requires, for health's sake or other reasons, a profession which shall keep him employed in the open air and in a warmer climate than his own, nothing could be better than squatting at the Antipodes.

The descriptions of wonderful fertility of particular lands, given in the papers, apply to all places within the same latitudes. The country bumpkin may marvel to read of some paradise where melons and peaches are as common as apples, yet, as a mere matter of course, such is the case in all warm climates.

If a man has determined on forming a new home for himself, the distance he travels can matter little. Once on board a vessel, with all his belongings, a longer voyage is possibly far more advantageous than a short one. In the seventy days of rounding the Cape in a large vessel, he must be able to glean an immense amount of experience from the many on board, who are able and willing to tell him all

they know of the country whither he is bound He will land with less thought of and regret for home, and with more knowledge of what is best to do. He will have had time to think over his position and make up his mind; he will have formed some sort of correct idea of his newly adopted land; whereas after a short voyage he would be suddenly set down, after a week's semi-sea-sickness, in a land of strangers, with all his home ties and ideas still strongly influencing him, and with but very vague notions of what to do or how to do it.

Thus, by the long voyage, after seventy days spent in preparing himself thoroughly for his new life, he will reach one of the Colonies, and land in a large port, as blessed by civilization as the port he left in the old country, and there he can take a good look round

Previously, however, to quitting the old country, one great and most important work is to choose the land of his future home. He must consider his reasons for emigration—what his means are, what his family is, what his objects in life are: whether he boldly faces the backwoods, and cares not for cold; whether he seeks for a more comfortable home for a numerous family on the same

means; or whether he seeks merely a warmer climate and more health-giving life.

ADVICE TO THOSE GOING—WHAT TO DO.

Emigrants must remember that the Colonies as a whole are not at all like the old country. The large seaport towns certainly are exactly the same as the seaport towns of England; but inland—up country—all is changed. There are no villages, farmsteads, or manors.

The stoppage places are townships, which often consist of a few publics, a couple of stores, a doctor's and a clergyman's house, a forge, and possibly a butcher's, and even a chemist's shop. On rare occasions some enterprising individual starts a non-descript business, in which he combines anything for which a demand could arise. He may be barber, and besides make ginger-beer and soda-water. These townships are miles upon miles apart, often thirty or forty, and the whole intervening country is occupied by the squatters, except in the immediate neighbourhood of the townships, and there one finds a few small farms.

The squatter pitches his tent among hearty, hospitable, energetic neighbours, separated from each

other by ten or twenty miles, and then he brushes himself up by annual visits to his capital. There he attends operas, balls, croquet parties, and all else. There he enjoys his season, and then returns to his sheep, to work up next year's load of wool.

Perhaps the largest class of emigrants are young men who are sent out with vague notions of their doing well in the Colonies. If one of these men has money to invest, he should not be able to invest it till after three or four years spent in knocking about. This cannot be too strongly insisted upon; after a few months of the life he feels certain he knows all about it. There are numerous friends ready to advise him: some of them may be sincere, and possibly their advice is the best he could follow; but a far larger number are bad advisers—some perfectly honestly so—having pinned all their faith, and money too, on a favourite but madcap investment. Then there is also no lack of advisers whose whole object is to strip "new chums."

During these three or four years the man who has money to invest should never be without sufficient to live upon; but it is best for him not to have more than just enough, say a £20 cheque every quarter. If possible, he should get on to a station; that is to

say, if squatting be his aim: or he may, more especially if scientifically inclined, do much on the gold fields; but let him form an intimate and personal acquaintance with them before investing. The same remark would apply to his first dealings with every other industry he may wish to try.

The young man without future advent of capital cannot, of course, aim so high. Let him, however, try, say for two or three years, at everything; and during that time he will be able to pick out that which best suits him to stick to, at which he should commence as soon as the said two or three years are over.

The learned professions—lawyers, doctors, &c.—in the capitals, do uncommonly well; and there are many openings in the same lines up country. Banks have innumerable branches, which are usually in the charge of youngish clerks.

Again, there is all the police work—the Magistrates and Clerks of the Court. Solicitors find a good deal of work also. In short, there is a great deal of desk-work required over the large and thinly populated districts. The inhabitants are highly civilized, and accordingly doctors, policemen, newspapers, and clergymen are in great demand.

There are endless ways of gaining really good livings in Australia; but there, as elsewhere, there are not any royal roads to fortunes. People must not imagine that the sacrifices they make in leaving home and undergoing a long voyage are to be necessarily repaid in a few years by a fortune. All they can do is to improve their condition of life; but they have to devote to it fully as much toil and industry as they would do in the old country.

Men with capital should never invest till they have examined personally into the locality which they may choose; otherwise they will very likely lose it all, through some little false step easily to have been avoided by looking round beforehand.

People must make up their minds not to get discouraged, not to lose heart, at missing all their accustomed home surroundings. They must firmly resolve to set themselves cheerily to work at their new labours.

The Colonies are by no means so rough as some would have us imagine. Even in the farthest stations ladies enjoy thoroughly their life and all its surroundings. I have known two ladies in particular, both delicate and extremely refined, enjoying their life, 400 miles inland from the capital. These

are ladies who had been accustomed to all the luxuries of London, and of seasons at Cowes, Brighton, &c. We are more liable to hear violent abuse of the Colonies in England than even small praise, and for this reason: those content with their life out there—those who get on—an enormous majority, remain there, and are unheard of except in the indirect way of the marvellous increase and prosperity of our Colonies.

The roving ne'er-do-weels, who, after failing in every direction at home, are sent out, find themselves still less in demand there, among honest and hardworking men: they become dispirited, plunge into extreme excesses, and return noisy and full of complaints. Their friends in England are aghast at the terribly increased viciousness of those whom they supposed very near the acme of badness. These failures are heard of, and these only; and so no wonder report treats Colonial life so harshly.

Let a man only pay a short visit to the Colonies: let him, however, not merely flit from one home-like port to another, and then home; but let him visit the up-country, and really enter into the inner life, and he will bring home a very different

account to that brought by the black sheep of families.

Nowadays wonderful successes are of less frequent occurrence than formerly; yet failures are as common, and failures make most noise, while moderate successes are unheard of.

CHAPTER LIII.

THE LAND QUESTION.

SQUATTERS *v.* "FREE SELECTORS."—PASTORALS FIRST OCCUPIERS.—AGRICULTURALS FIRST OWNERS.—SQUATTERS COULD MAKE ENORMOUS IMPROVEMENTS.—GOVERNMENT SHOULD AID THEM.—FAILURES OF "FREE SELECTORS."—PICKING OUT THE "EYES" OF A RUN.—"GULLY-RAKERS."

IN all parts of Australia the antagonism existing between squatters and "free selectors," or "cockatooers," continually forces itself upon the attention. One hears, too, of the frequent changes in the land laws. Such a state of things is by no means attractive to intending settlers.

Each Colonial Government has a vast area of land belonging to it; and each tries, very naturally, to make the most of such land.

The squatters rent large tracts, whereas the free selectors are allowed to take up and occupy small portions of land as freeholders, anywhere they please, even where rented by squatters, by paying so much an acre, in instalments, and making

on their "selections" improvements to a certain amount.

Government, by this latter means, gets rid of land at generally the very good price of £1 an acre, and moreover gains much by the frequency with which free selectors fail before having fulfilled all the terms, thereby forfeiting what they have already paid, and leaving the Government free to resell the land.

At the moment this appears a great gain for the Government, but it is evidently a suicidal method of procedure.

The first improvers of land, in all ages, have been owners of flocks and herds; and such a class are peculiarly fitted to be the first *occupiers* of land. Squatters are the Australian representatives of this useful class. With the rapid increase of their stock they reclaim unknown wastes, and, as it were, civilize them for the occupation of the agriculturists, who should ever be the first *owners* of land. After them arrive manufacturers and others, practising the more intricate arts of civilization.

The Australian Governments should do all in their power to assist the squatters. The country would be wonderfully improved by them, could they but be certain of personally reaping the benefits of

the money they lay out. This would be ensured by granting them long leases.

They would then render the land in every way more valuable; storing water, fencing, clearing, or planting trees, and greatly improving the grass.

Not only does the short lease at present in vogue warn the squatter he may never really benefit by any improvements he can make, but he also knows that the greater part of the good of such improvements may be appropriated by any man choosing to "free-select" near them.

For instance, he may create at great expense a huge lake of water, and it may be soon surrounded with the residences of free selectors and their thirsty animals, even to the utter exclusion of his own flocks.

The squatter is the supplier of the staple products of Australia, wool and meat. He is likewise the greatest possible help towards the reclamation of wild country.

Let us therefore recapitulate that he should be greatly assisted and encouraged by Government: and that the surest way of so doing is by guaranteeing to him, by long leases and other means, the full benefit of any outlay he may make on Government land.

The "free selector" is by no means to be envied. It is a great temptation for any man with a little sum of money, in this easy way, to get for himself a freehold home; but, unless he work besides for others, he will not find it a very paying business.

The "selector" has often saved money while in the employment of some squatter; and usually on his or neighbouring runs he will "select" a likely spot, build his hut, fence in his bit of a paddock, and, if he be an honest man, he will probably turn to farming. He will then proceed to fail. In the first place he has forgotten to secure a market within reachable distance; and then again he has probably settled down where land is worth but little for agricultural purposes; and the small amount of space he is allowed by Government to "select" is of no use for pastoral purposes. Government very properly confines "free selectors" to agriculture.

Being, however, an object of interest with the squatter, the latter will probably, to save the "selector" from ruin, buy his farm; the man will start again working for others. And thus squatters become landowners to a much greater extent than they would have done had "free selectors" never had existence. Another fact must here be remem-

bered, that frequently squatters are forced to purchase land they do not want, merely to keep "free selectors" from breaking up portions of their runs.

Thus, in a mountainous district, a man may "select" on some isolated plain, and his own beasts and his rights of grazing, which extend beyond his purchased land, will soon prevent the squatter's cattle from benefiting by the plain, and very likely these cattle will no longer stop on that part of the run. And this is the case especially if the beasts are at all wild, as it is probable they would be in such country. And so the squatter loses all use of a very large portion of land for which he pays rent. This picking out the "eyes" of a run is a well-known evil up country.

It is possible, however, that a man may "free-select" on a run out of spite to the squatter personally, or he may be a bad character generally—a "gully-raker," &c.; and then the chances are that great rows take place between the squatter and the "free selector," concerning trespass of horses, sheep, cattle, &c.; concerning the maternity of calves, and other little pleasantries of the kind.

A "free selector" in New South Wales, for instance, can take up a goodly bit of land on payment of a

deposit of five shillings an acre, and he can pick it where he please, no matter if it be rented, so long as it be not already purchased. Two or three men can thus pick out the "eyes" of one run, and materially injure the squatter, though often at the same time ruining themselves.

The object of free selection is to give the working man a freehold farmstead for his home; but to make that home beneficial to him, Government should step in, and only allow him to take up land worth the tilling and farming.

A rational land law should enact—

1. That the pastoral class, the squatters, should hold, at a low rent, large districts of country; that the benefit of any improvements they may make on that country shall be guaranteed to them by long leases and other means; that their runs shall exist in pastoral districts, and not be liable to be cut up by the settling upon them of agriculturists.

2. That the agricultural class, the "free selectors," should have certain areas of land set apart for them where they may be assured of good soil, and thus be enabled to make themselves thriving homes without chance of failing, and avoid doing indirect injury to the country by crippling the pastoral interest.

CHAPTER LIV.

NATURAL CAPITALS.

CIRCUMSTANCES AND TALENTS. — CAPITALS. — LOVE OF OWNING LAND.—BAD IDEA FOR EMIGRANTS.

SINCE the arrival of man in the world there have been perpetual questionings as to why all men are not well off. Why should the good things of this life be so unequally distributed? The two great causes, one as powerful as the other, are circumstances and talents. But these two opposite causes, all through man's life, influence each other greatly. Circumstances call forth peculiar talents which might otherwise lie uselessly dormant, and talents often take advantage of peculiar circumstances which might otherwise be overlooked and missed. It is by no means improbable that as the world grows wiser some means will be found of considerably raising the lowest stage of existence, but it is entirely against the nature of things that all should be equal in every way. Innate pride

continually urges men to seek that which is above them, and to many, happiness in life is the mere gaining of such successive steps. The essential rule is to work one's own circumstances to the highest point attainable by means of the talents possessed. These talents may be said to resolve themselves into various capitals. The one capital at present in highest favour is money, though there is still a lingering desire after the far less useful one, the possession of land.

Now, a man may have capital to live on and make fortunes by, in money, in brains, or in health and strength; in fact, he may thrive by the possession of "talents," whether of gold, of the mind, or of the body.

In the first stages of civilization, each household, or small society of human beings, do all the work necessary, and live entirely independently of everybody else; but as the world grows, so has man found the great value of combination, and by division of labour rendering all works more perfect and more easy of accomplishment.

Take as an example the preparing New Zealand flax for exportation. The Maories, in a very high stage of savage-civilization, prepared it for

exportation by each individually setting to work and scraping the flax-leaves with mussel-shells; thus Europeans received every now and then small quantities badly prepared.

The Englishman arrives, fully acknowledging the existence of several distinct capitals. Each man brings his own peculiar capital to bear on the subject. The speculator brings money, and purchases the land, the engine, &c. The architect, the engineer, and the farmer bring their stock of skill to aid in the working; and the labourer and "unskilled" artisan support the whole with their capital in strength and health. Thus a manufactory is raised, a steady supply kept up; and flax, properly prepared in large and dependable quantities, is regularly transmitted to Europe.

With this firmly imbued, though often unacknowledged, fact of the diversities of capital, it is impossible for a people to continue long in the humanly-imposed possession of equal personal shares in any one capital, *e.g.* that of land.

Take as an example three brothers, holding each an equal share of land, but each naturally endowed with a different natural capital. A, that of steady painstaking farming capabilities; B, that of a brain

ever urging him to the elucidation of philosophical and scientific inquiries; C, that of a great capacity for self-enjoyment. It is evident that A would prosper on his land; that B and C would probably starve. Then B and C would make arrangements with A to supply them with food, in return for which he would practically become possessed of their lands. . . .

It is a bad principle on which immigrants wish to become landowners at once. It is far better for them to spend several years in gaining experience of the country; at the same time accumulating coin of the realm, which will render their future possession of a home of their own really profitable.

The great delight of human beings in holding landed property is old established; and probably greatly fostered by the habits of European nations of handing down family lands and possessions through long generations.

Formerly, in the time, for instance, of the Roman Republic, land was the only recognized capital: a man who did not own land could not live independently. Accordingly, in the history of that period of Roman life, we have clear proof of the folly of such belief in the possession of land as the only real capital.

A curious and instructive lesson is to be derived from a study of the results of the various agrarian laws made about that period.

We read of the extraordinary greatness and cleverness of men who introduced agrarian laws; that is to say, laws dividing the public land equally amongst citizens, and moreover providing especially that no man should ever be enabled to hold more than a certain quantity; the men introducing the laws, of course gained great popularity at the time, were eulogized and praised on all hands, styled saviours of their country—in fact, almost made gods of.

But one now notices with wonder the rapidity with which these several agrarian laws would vanish. After a short interval some other hero (to the unthinking, uneducated classes) would arise, and render himself immensely popular by making another similar division of land. They never had any lasting effect, for the very simple reason that human beings hold in themselves other capital; that of brains being at least equal to that of land.

The emigrant should not look forward to the immediate ownership of land as the *summum bonum* of prosperity. He should look to the acquisition,

by whatever capital he possess, whether of money, skill, or muscle, of a supply of the good things of this world; living as enjoyably as he will. *The fact of his owning land does not make him prosperous.*

It is by no means every man arriving in a new country, who is likely to succeed in taking up new land, and improving it by his personal labour on it. To succeed in that way, a man must hold the natural capital of farming powers.

Let him, by whatever capital he possess—money, where money pays; strength, where strength pays; skill, where skill pays; farming powers, where farming powers pay—strive to acquire an independence, and then let him enjoy it, if it be his particular desire, in living on land of his own. But let him not be led away by the seductive idea that a possessor of land is therefore well off.

All human beings, to exert any sort of capital, need to be fed. Australia's vast tracts of fertile land are waiting to afford food to a thriving nation. There it is that the overplus of population in the older countries will find a marvellously remunerative field for the expenditure of capital, whether of money, brains, skill, or strength.

CHAPTER LV.

SYSTEMS OF COLONIZATION.

VARIOUS SYSTEMS. — GREEKS LIKE ENGLISH. — GREW TO GREAT POWER.—NO COMMUNITY OF GOVERNMENT.—ALL DISAPPEARED. — ROMAN PLAN LIKE OUR INDIAN. — AMERICA PROVES ENGLISH SYSTEM BY FAR THE BEST.—DUTY OF THE OLD COUNTRY.

THE long prosperity enjoyed by England has caused her overplus of population to seek their homes in various unoccupied portions of the globe, and thus to form numerous Colonies, which have now reached a size and influence hitherto unprecedented in history. It will appear evident that the relations at present subsisting between the mother country and her various offshoots cannot hold good much longer. In short, a very grave question is now coming to the front and demanding an early settlement. It is one which concerns the future management and arrangement of that vast power, the germs of which are readily recognizable

in the present extent of empire held by the British race.

A very profitable lesson, on many points bearing on this subject, is to be derived from a consideration of Colonies generally. A brief summary of the chief systems which have been adopted at various times by various nations will aid us greatly in arriving at correct opinions with regard to the present and future of the British Colonies.

The earliest colonists concerning whom we have much information were the Phœnicians, but their settlements were mere factories, as it were, established to enable their merchants to obtain the good things of any foreign land for shipment to their own.

With the Greeks we find a system resembling in a very remarkable degree that of the English at the present day. Perhaps the only difference is that, frequently, bands of colonists would leave their native country, being forced therefrom by some hostile, and at the same time more powerful, political faction. The more common causes of exodus, however, were, as with us, the want of room in the old country, and the need of forming trading places in distant lands for the benefit of the merchants.

These colonies, though left entirely to themselves, were always more or less connected with the old country by ties of common descent, and always looked to her for help if attacked by an enemy, and at the same time they ever remained the declared enemies of any state warring against their mother country. This having to look after their own interests, and being at the same time preserved by the mother country from utter demolition, had its fruit in rendering the various Greek Colonies of extraordinary power in the civilized world of those days.

Thus far the comparison holds good; but what follows, though it is matter of history with regard to the Greek Colonies, is at the same time a possible future for the English Colonies, and one which should be earnestly and energetically avoided. Greek Colonies were held by no close ties either to one another or to their mother states: there was no community of government—they existed as separate states: the consequence was, they were each individually crushed in detail; and old Greece, once mistress of the world, afterwards possessed nothing but a fair name of antiquity—and *Magna Græcia*, as her numerous Colonies were proudly

called, was absorbed by neighbouring powers. May Englishmen bear this fact in mind.

The Colonies of the Romans were of a peculiar and different nature. The two terms in use by the two nations well indicate the respective difference: *Colonia*, "the utilization of land;" *ἀποικία*, "the making a living away from home."

The Romans established Colonies in order to get as much as possible out of the countries occupied. The individuals proceeding as colonists were either freedmen who could not compete with the slave labour at home, or soldiers thus receiving grants of land as their reward for conquering new territories.

In fact, the Roman Colonies were little more than garrisons for holding conquered lands; outposts from which to push on to further conquests. Of themselves they never grew to any great size, for the reason that they were planted in the midst of other nations more or less powerful. They had, however, wonderful effect in strengthening and civilizing those nations; but, until the nations of the country were admitted to equal rights with the colonists, the various countries occupied never prospered.

Of English Colonies, India is that occupied most in accordance with the Roman plan. The success the Romans achieved, in thoroughly amalgamating certain of their acquired territories with the older portions of their empire, is an earnest of what may be hoped for from the management of India; provided that in that management, after the plan of the Romans, due consideration be paid to the powers and qualities possessed by the natives of the land.

America affords a most instructive lesson as to the success of various plans of colonization. The earliest foundation of all Colonies in this quarter of the world was mainly achieved under the same incentives as that of those of Greece. Portuguese Jews, persecuted at home, sought refuge in Brazil; English Puritans found freedom in New England. But in addition gold was discovered; and so, wherever there existed dissatisfied spirits, they shipped themselves off to "El Dorado."

Gold occupied much the attention of all the early settlers in America: even the English Companies, by their charters, were bound to reserve one-fifth of any possible finds for the King of England. The colonists of other nations frequently

were relieved by their Governments of one-half the gold they obtained.

As, however, the numerous districts in the land of the West became more settled, the various European Governments vied with one another in imposing crushing monopolies on their various offshoots; each jealously studying to turn to itself alone the commerce of its Colonies, and thereby holding the monopoly of supplying them with the necessaries required from Europe.

England was the only mother country that did not greedily watch her colonists in order to catch up her full share of gold found in the country, or make the most out of monopolizing companies, which were allowed to squeeze every possible penny out of the wretched colonists of other countries.

The monopolizing tendencies of the English Government rapidly diminished, and finally almost disappeared, whilst those of other nations still continued dominant.

All the various colonies in America started with unbounded supplies of good land: those planted by England were left entirely to themselves; whereas on those sent out by other European

Governments taxes were levied by the old country, which also imposed a ceremonious system of government, both in civil and ecclesiastical matters, of great expense to the colonists, and strongly contrasting with the expenditure of the English Colonies; which, when they possessed a population of three millions, spent but £65,000 per annum in governing it right well.

By comparing the huge growth of the United States with any other American power, *e.g.* Mexico or one of the South American Republics, one sees the enormous comparative success of the English system. English Colonies were left to make for themselves the most they could out of the land; other Governments merely looked upon their colonists as men out of whom money was to be squeezed.

It must be borne in mind that Colonies increase in size and importance at a much more rapid pace than any other form of human society. They start with all the advantages of the pick of good virgin soil, worked on by the most energetic men of a nation, who have been formed and educated by centuries of hard work; and thus it is little marvel that they rapidly rival their mother states.

The duty of the old country consists in protecting and fostering her children, as far as is compatible with the giving them opportunities of learning that self-reliance which is so indispensable to a nation.

This end is best attained by her allowing them to learn entirely how to manage themselves, but at the same time watching that they fall not into misfortune: and being ready to keep them under wing till they be strong enough to take care of themselves.

From a glance at the various systems of colonization, we thus see how that practised by the English has points of superiority: and we may turn to Australia for further examples of its success. One fact will amply prove the present importance and recent growth of this the youngest group of the Colonies. Australia possesses a greater number of sheep and horned cattle than even the United States, or England, or France, or Austria.

CHAPTER LVI.

ABNORMAL CONDITIONS.

PRESENT RELATIONS. — COLONIES RAPIDLY BECOMING STATES. — NEW PHASE OF EXISTENCE.—NEW RELATIONS WITH THE OLD COUNTRY.—ONE GOVERNMENT BAD.—SECESSION OF COLONIES RUINOUS FOR BOTH.—FEDERATION BENEFICIAL TO ALL.—QUESTION OF VERY GREAT IMPORTANCE. — GROUPS OF COLONIES TO FORM INDEPENDENT POWERS WOULD DESTROY THE ENORMOUS POWER OF THE HUGE BRITISH EMPIRE.

THANKS to its various acquired territories in Australia, America, South Africa, India, &c., the British nation has now possession of ample lands for all requirements of its increase to live upon, for some time to come; and, ere long, several powerful British-grown states will be in existence in various parts of the earth.

If we regard the relations subsisting between her Colonies and England at the present day, we shall discover them to be of a very anomalous species; moreover, we shall perceive that this anomalous condition, if it be allowed to continue in existence, must increase with each successive year.

England is at present acknowledged to be one of the Great Powers: her Colonies bid fair to grow to nations of good size in various centres. But this huge empire is at present in a very unsatisfactory condition with regard to its internal relations.

The Colonies possess entire powers of self-government with regard to local affairs. The sequel to this is, that when they reach a goodly size they must become independent; that is to say, they must either secede and form themselves into independent states, or they must possess a fair voice in the general management of the empire.

Under present circumstances England is bound to defend her Colonies in time of war; and yet the smallest of the Colonies, no matter how much valuable territory it may possess, is apparently at liberty to cut all connection with England at any moment it may choose. It might be that an English force, defending a Colony against some foe, would be obliged to retire because those in occupation of the land should determine to hand it over to the foe.

Thus Queensland, which is now attaining such size and importance, in former days when only occupied by an insignificant few might have seceded from the British Empire, and devoted its prosperity

to the benefit of any country it might choose—to the great detriment of the British community.

Assuredly every inch of land held under the British flag is the property of the whole nation, and ought not to be under the entire and absolute control of any small set of people which may chance for the time to be in its occupation.

We have already seen how the want of a common government, in the Grecian world, culminated in the total annihilation both of the Colonies and of the mother cities.

The various component parts of the British Empire are as nothing, individually, when compared with the powers of Russia, Prussia, &c. Yet, bound together, as a whole, their power would be enormous.

It would be impossible for so huge a number of human beings as that which could exist on the soil at present in the hands of the British race, to live under one central Government; more especially as the various Colonies are so far distant from one another and from the old country. It is evident that as each Colony arrives at a certain stage of prosperity or power, at the possession of whatever number of inhabitants its coming of age be fixed,

it will equally need to enter upon some new phase of existence; it will then become a state, no longer the cared-for child, but the friendly equal of the mother country.

What then are to be the mutual relations between this mother country and her various offshoots, as they severally come of age?

There are but two possible methods to be adopted: either the Colonies must secede from the old country, or they must stay with her. It is impossible to suppose that a Colony would secede simply from an idea of being better off. An independent state of such small size would meet with but little encouragement; its prospect of independent prosperity would indeed be small. It would exist at the risk of extinction by any power with whom it might have disputes. Its population would in all probability be extremely divided in opinions, and would soon heartily regret the secession. At the present time the Colonies are by no means desirous of thus rushing on their own destruction. They would only secede if provoked to it; and they are not likely after such an occurrence to become friendly allies.

The benefits of maintaining the integrity of the

empire are palpable on all sides. We are trying to bind our Colonies closely to one another; we do not invite Ireland or India to enter on a separate life; in short, we acknowledge the value of federation, yet we fail to work it out so as to benefit the whole empire.

The established prestige and credit of England would immediately extend to the Colonies, to their immense benefit, were they closely connected for ever with England. In the present state of affairs the Colonies are looked upon as distant countries, having scarcely more intimate connections with us than if they were foreign states; whereas, were they to be firmly and closely bound up with England, so as to become manifestly integral portions of one powerful empire, it is certain that merchants and emigrants would devote their exertions as much as possible to their own country, which in that case would afford ample scope for the most extended enterprise. Consider the comparative status and influence of some small German principality, in its former independence, and when afterwards by annexation contributing to the power and greatness of united Germany.

Englishmen have now to settle the question—

whether they will consolidate into one the enormous power at present within their grasp, or allow it to crumble to pieces and afford choice pickings to all the powerful nations on the earth.

It is earnestly to be desired that every man of British race should be brought to consider this question with all the serious attention it demands.

There are but two plans available: *one*, whereby England is to build up and launch her Colonies on the world; they, as they reach a healthy size, are locally to federate together, and so establish several totally independent States commanding various parts of the world—say a Republic of Australia, Kingdom of New Zealand, Empire of South Africa, &c. These, though no longer sharing in one paternal Government, and then forming completely separate States, are ever to live closely connected with the old country in the production and preservation of all that is good in civilization.

But, as we have seen, no analogy or reason will allow of any hope that such a result could be brought about. Individual States must adopt each its own course. They may join in leagues for the obtainment of some common advantage, but such leagues ever have broken, and always will break, to

pieces when that aim is obtained, or when the struggle for it turn hopeless. It is not likely, nor is it reasonable, that, *e.g.* New Zealand, if an independent State, should be ready to spend its last shilling and its last man in aiding Vancouver's Island to resist an invasion of South Americans. In short, the very fact of their being independent renders States unavailable for mutual assistance, except under peculiar circumstances.

CHAPTER LVII.

CONSOLIDATED EMPIRE.

FEDERATION.—LOCAL GOVERNMENT.—EACH COLONY ONE STATE.—LOCAL GROUPS AS ONE STATE.—GENERAL PARLIAMENT OF REPRESENTATIVES.—ITS MANY DUTIES.—OFFENCE AND DEFENCE.—DEFENCE OF AUSTRALIA.—NAVY.—ARBITRATION INSTEAD OF WAR.—ENORMOUS INFLUENCE OF SUCH AN EMPIRE.

HAVING considered one plan, let us now look into the other, founded on the incontrovertible fact, that general Federation of some sort must be arranged, if our empire is to remain as one power.

Turning to the details of this Federation, we see that the units required as component parts consist of England and a variety of Colonies. First, it must be settled whether these latter are to enter in combination (*i.e.* whether local groups are to be made, each of which is to enter as one State), or whether each individual Colony should form a separate State in the Federation.

On behalf of the group-method, we have the fact that local combination seems peculiarly appli-

cable, owing to geographical position. In such case we should have five powers, as it were, in one—England, North America, South Africa, India, Australia (though the latter from its great size might again be subdivided: New Zealand, Tasmania, South and West Australia might form one division, and the other Colonies a second division). The drawback, however, to this arrangement would be its inequality with regard to population. In this respect South Africa could hardly be said to equal India. Moreover, the various smaller Colonies—*e.g.* West Coast of Africa, West Indies, &c.—would require some different and special arrangement.

If, on the contrary, it were decided that each individual Colony should form a separate State in the Federation, then each separate Colony, of a definite size, should manage its own local affairs, and send representatives to a veritable Imperial Parliament, which should carry on the general government.

The first step towards the founding of such a Federation would be the promulgation of some large and general plan fairly applicable to all. After due consideration, a special standard should be arranged, at which a Colony should become a

State of the Federation. Let this, for instance, be a certain amount of population.

Then, the equitable representation of each State in the General Parliament would need most careful consideration. Let all this be done in consultation with the Colonies themselves, and then let the results be laid before them for their acceptance within a given time. In the highly improbable event of any particular Colony declining to enter, let that Colony stand aloof, but in perfect good-will (and with the understood option of entering the Empire afterwards?).

Seeing that Europe still remains the nucleus, as it were, of the world's power, no better centre could be found for this Federation than the British Isles.

All the States forming the Federation should have their local affairs entirely in their own hands; even the keeping in order turbulent natives. But here it must be remembered that if the colonists are compelled to apply to the General Parliament for aid against the said natives, the Parliament must be allowed some share in the local management: the Colony, for the time being, giving up its exclusive right to manage its own affairs; which,

indeed, will in that case have got beyond the control of the colonists themselves.

Moreover, neighbouring Colonies would do well to federate among themselves concerning local affairs, alike affecting all in that portion of the earth.

The new General Government, to consist of representatives of the various States, fairly arranged with regard to population, or some other indication of power, will have important duties to perform.

It will have the charge of watching the growth of the Colonies not yet of the size of States; that is to say, if it had not already been arranged that all Colonies holding but little territory, or in other ways not yet of age, might be represented in groups, in the Imperial Parliament.

Under its charge will be the various important outposts, such as Malta, St. Helena, Gibraltar, Hong Kong, &c. With so many powerful centres of commerce in various parts of the globe, it would have much to do in the regulation of trade and "customs."

The foreign policy would be one of the most weighty functions of the representatives. Not only would European questions arise, but India would

beget Asiatic—Australia, Oceanic and Pacific—the Cape, African—Canada, American—questions; all of which would be authoritatively settled by the great powers of this Central Parliament.

One of the most important questions is the management of powers of offence and defence. A federal fleet is evidently required, and this should be supported by all alike. The army is a more difficult question: whether it is to be arranged locally for defence, or whether there is to be a federal one for all alike. The best plan would probably be one army, though to be attached as much as possible to localities. India of course would take a large share of the force. Yet a common army would be great source of union, and both officers and men should have the opportunity of working their profession in various parts of the globe.

A Federation of so many isolated communities would of course rest its chief strength on its ships. Its army would be mainly required for local purposes of defence: though there should likewise be good force available for essential assistance, and for backing up questions of foreign policy determined by the Imperial Parliament.

We may here profitably notice that in time of

war, Australia, even in its present condition, would be easily defendable, and would moreover prove a powerful aid as affording harbours and refreshing stations for numerous men-of-war, which would, were the Federation at war, hold possession of the seas of the south and the east.

Owing to the thousands of miles of sea to be traversed, we may fairly assume that no country, or even combination of countries, could possibly bring against Australia a force of as many as 5,000 men at once, even supposing the sea was cleared of all English vessels of war. Such a force, moreover, would be of little use, even were it landed in the country.

In the event of war, the capital towns of the various Colonies would be the only profitable points of attack, and they are easily defendable by a well-arranged system of forts and artillery. In fact, it is highly probable that with merely the least show of guns ready for use, at the mouths of the various harbours, no hostile vessels of war would care to risk an attack.

A force landing at any other point of the coast could be rendered utterly harmless by means of corps of well-ordered irregular cavalry, the material for which abounds in Australia. The few stations

within reach of the enemy could be easily deserted for the time; the small amount of flour and other stores (probably two dray-loads to each station) destroyed, cattle and sheep driven off. Thus the enemy would find no food save a few kangaroos, and would be obliged to depend on supplies necessarily brought thousands of miles over the sea. In short, it would be utterly impracticable for a large force to be landed anywhere but in the neighbourhood of a capital; and there the colonists might well rely on good artillery, ready with its guns at any point threatened.

The Colonies, at little or no risk to themselves, would be able to render invaluable aid to the Federation in time of war, chiefly by assisting in the work of keeping possession of the sea, by affording safe harbours wherein to build, refit, provision, and man numerous vessels of war.

In all these considerations we must not look at each power as it now exists, singly and locally, but we must bear in mind what would be the enormous inexhaustible and ever-increasing resources which would become available for the whole Federation, by such an Union.

A further benefit, in the attainment of some

such Federation, is, the aid it could afford to the advancement of the great principle of settling disputes by arbitration rather than by appeals to war.

The vast spread of the English race is as yet in its infancy—this race already occupies and includes one-seventh of the habitable earth, and only three-sevenths of the remainder are in the hands of civilized men. Thus the Federation itself would be the means of abolishing war over its own vast proportion of the earth, independently of the great influence its example would have on others.

For the attainment of this mighty effect, order must be strictly preserved within the Federation. True liberty must be paramount: true liberty—not every individual having a finger in the misgovernment, but each citizen having opportunity to act rightly without fear of oppression: each individual being able to apply all his energies to work for the best, under the firm protection of the General Government. Let each State of the Federation be fully aware that if it opposes, even with arms, the decision of the General Court, in which all are equally represented, it will be forced by the other members to obey; the condition of Federation being obedience to this Court.

It is to be earnestly hoped that the settlement of the Alabama claims by arbitration will be confirmed, and lead to a closer union between England and her old Colony. Would that the old Colony could again be united, in this new Federation! In that case, England, the United States, North America, South Africa, Australia, India, and various smaller possessions—or, in other words, one-fifth of the habitable globe, already occupied by one-quarter of the total population of the world—would have determined to settle all disputes and questions without appeal to murder.

Such are the channels in which one's thoughts run, when occupied with the consideration of the marvellous development and spread of the English-speaking race.

APPENDIX.

APPENDIX.

NOTE I.

RAILWAY ACROSS AUSTRALIA.

At last there appears on the horizon some proof, tangible and recognizable by all, of the enormous strides made by Australia. This huge mass of land, during the earlier years of our century, first began to be skirted with small settlements along parts of its coast-line. Sixty years have developed these small settlements into vigorous colonies, fast overspreading the whole island-continent. Already one may journey from Adelaide, in the south, to the Gulf of Carpentaria in the north, over 1,000 miles, stopping each night at a well-supplied sheep or cattle-station.

It is interesting to trace such a track across one

of the maps which a few years ago was considered to give us the latest details of Australia. We find the route passing what the map calls "explorers' furthests," crossing "stony wastes," "dense forests," "waterless tracts," "extensive sand hills," where the traveller now-a-days, on the contrary, finds abundant flocks and herds, and thriving stations.

Telegraph wires have been laid along a parallel track to this (still farther to the west), and it is a project of the immediate future to run a line of railway to follow these telegraph posts. Any speculation which can be proved to have good prospects of being remunerative is sure to gain plenty of support at its start; and this railway idea seems to have specially good prospects. It is estimated that the line, a trunk one at first, can be constructed for something under eight millions sterling.

The Company is to be paid by Government in gifts of blocks of land adjoining the route, which will amount in the aggregate to nearly 200 million acres. One penny per acre is a fair average rental for station-lands, and would give an interest of 10 per cent. per annum on the eight millions invested. This is, of course, supposing all the land to be

taken up by squatters. It is also likely that large portions of this land would be sold. Townships, farms, head-stations would all require purchased land, and the average upset price of eligible Government land is £1 per acre. So that the sale and rental of this land should alone return an extremely good profit on the money invested.

It is by no means improbable that the railway itself might yield large returns. In its southern start and through the more settled districts it will have an already large and a very rapidly increasing traffic. Then, too, there is the usual talk of a rival gold district to Victoria being opened up near the northern end of this railway.

It is proposed that the Company should run branch lines to meet the Brisbane, Sydney, and Melbourne railways. It might attract the passengers and light mails of the Overland route, saving so many days or hours between Galle and the eastern parts of Australia. In short, an analogous portion of the mail traffic to that which travels *viâ* Brindisi instead of *viâ* Gibraltar may ere long adopt the Port Darwin route, instead of following the circuitous coast-line of Australia. A good port on the north coast, connected with the rest of the continent by

branch lines, would probably cause the divergence along this new route of a very large proportion of the commerce of Australia with India, the East, and China.

The presence of a railway would probably be a very great attraction to squatters, as they would see in it a sure remedy for their present great want—viz. a quick and moreover really dependable means of transport. No floods or droughts could trouble or impede their wool and stores in their journeys down and up. Sheep and cattle stations would assuredly rapidly line both sides of a railroad.

With the completion of such a highway we may fairly congratulate our race on having won to civilization by far the larger half of the great island of Australia.

NOTE II.

THE SOUTHERN CROSS.

As the southward-bound voyager enters the northern limits of the Tropics, he gradually loses his old friend the Great Bear, and becomes more and more familiar with its prototype of the southern heavens.

Amidst a flood of lesser lights he views one distinct group containing three stars of the first magnitude. Only one of these stands in a cluster familiarly known as the Southern Cross, a constellation which has probably achieved more notoriety than any other star-group; this can hardly be said to be due to its brilliancy or magnificence, but more probably to the fact of its being, to the vast majority of Europeans, unseen, and therefore marvellous.

True that in it is situated that remarkable cluster of coloured stars which Sir John Herschel compares to a "rich piece of fancy jewellery," but these being purely telescopic, have not caused its special popularity.

Sailors destroy all the careful classification of astronomers by arbitrarily robbing a neighbouring constellation (Centaur) of its greatest lights, and adding them to Crux, under the title of "pointers." And the group thus formed has been adopted as the brilliant emblem of the five Colonies in Australia itself, together with the two Colonies occupying neighbouring islands, — New Zealand and Tasmania.

Hence the design on the outside cover of this book.

INDEX.

INDEX.

A.

ABNORMAL CONDITIONS (CHAP. LVI.), 476–482.
ABORIGINALS (CHAP. XLVI.), 395–400; 346, 380.
Acclimatization, 76, 292.
Adders, 284.
Adipocere, 231.
Albatross, 293, 343.
Alcohol as an antidote for snake-bites, 285.
Alligators, 275.
Alluvial gold diggings, 236.
American Emigration System, 441.
Ammonia as an antidote for snake-bites, 280.
Angling (*see* Fish).
Ants, 272, 313.
"Apple tree," 210.
Apteryx, 381.
Artesian wells, 418.
Auckland, 84.
AUSTRALIAN ISLANDS (CHAP. VII.), 66–69.
Avon, River, at Christchurch, New Zealand, 76.

B.

Babies' hoods, 157.
Badger, 316.
"Bail" in cattle yards, 195.
Bait for fish, 291.
Ballarat, Victoria, described, 47, 48.
Bandicoot, 259.
Bark roofs, 151, 162, 208.
Bark used for tables, 165.
Barracouta (fish), 293.
Basaltic rocks in Tasmania, 56, 62, 63.
Bat (Flying-fox), 364.
Bathers and mosquitos, 35, 267.
"Bathurst burr" in sheep's wool, 177.
BEARS AND CATS (CHAP. XXXVI.), 315–320; 259, 352.
Bee-eaters, 342.
Beef: Mode of killing cattle, 197.
Bees, 273.
Beet-root sugar, 217.
Bicycles, 115.
Birds, 262, 293 (*see also* Game Birds).
BIRDS NOT GAME (CHAP. XXXIX.), 339–344: Eagle-hawk, 339; Buzzards, 339; Crows and Magpies, 340; "Laughing Jackass," 340; "Soldier-bird," 341; Swallows, Bee-eaters, 342; Mocking-birds, Owls, Pelicans, Cranes, Albatross, Petrels, Parrots, Cockatoos, 343.
Black duck, 356, 358.
Black swans, 356.
Blow-flies of New Zealand, 392.
Blowpipe, a test for metals, 249.
Blue gum-tree, 210.
"Blue flier," a name of the female kangaroo, 329, 334.

Boars, Wild, 388.
Boating at Sydney, 34.
"Borer Camps," 399.
Botanical Gardens: Sydney, 20, 26; Melbourne, 44; Hobart Town, 44.
Branding cattle, 181, 196, 197.
Bread of the Bush, 137.
Bream, 288.
"Brick-fielders," 411.
Bronzewing, 353.
Brush-turkeys, 350.
"Buck-jumping," a vice in Australian horses, 201.
Buggies, 113.
Bullock-drays, 158.
Burra-Burra Copper Mines, 49, 248.
BUSH, LIFE IN THE (DIVISION III.), 147—232.
Bush clergy, 132.
Bushmen, or "Swagmen," 121.
Bush-mouse, 321.
BUSHRANGERS (CHAP. XI.), 99—106.
Bush-riders, 397.
Bustards, 348.
Buzzards, 339.

C.

Cabs, 42, 45.
Camping out in the Bush, 136, 370, 372, 373.
Canterbury, New Zealand, 72, 84.
Cape Howe, 54.
Cape Pillar, Tasmania, 55.
Capital, 463.
Carpet snakes, 276.
Carrying trade, 118.
Castlemaine, 47.
Caterpillars eaten by the natives, 274, 291.
Cats, Native (*Dasyurus*), 258, 319.
Cattle-dogs, 192.
CATTLE DRAFTING (CHAP. XX.), 190—199.
CATTLE HUNTING (CHAP. XIX.), 180—189.
Cattle, Embarkation of, 51.
Cedars, 211.
Centipedes, 271.
"Charging" cows, 190, 191.
Chinamen in the Bush, 158, 165.
Chinese: *Echidna spinosa* ("porcupine") eaten by them, 314; gold-diggers, 242.
Christchurch, New Zealand, 75.
Christenings in the Bush, 132.
Cicadas, 273.
CLEARING AND FENCING (CHAP. XXII.), 206—212.
CLIMATE (CHAPS. XLVIII. & XLIX.), 408—421; 84, 87, 125, 213, 448.
Clothing, 445.
COACHES AND HACKS (CHAP. XII.), 107—117.
"Coaching" cattle, 183.
COAL AND COPPER (CHAP. XXVII.), 248—253.
Coccus insect, 216.
Cochineal, 216.
"Cockatooers," or "Free Selectors," 456.
Cockatoos (*see* Parrots).
Cod-fish of the Murray River, 290, 294, 391.
Coffee, 217.
COLONIZATION, SYSTEMS OF (CHAP. LV.), 468—475.
CONSOLIDATED EMPIRE (CHAP. LVII.), 483—491.
Conveyance (*see* Coaches and Hacks, and Railways).
Convict element in the population of Sydney, 30.
Convict establishment at Port Arthur, Tasmania, 59—62.
Cook, Captain, his visit to New Zealand, 83, 87.
Cooking in the Bush, 137 (*see* Food).
COPPER AND COAL (CHAP. XXVII.), 248—253.
Copper mines of South Australia and Queensland, 49.
Coral rocks of Lord Howe Island, 68.
"Cornstalks," 401.
Cotton cultivation, 50, 66, 217.
Couch grass, 212.
Cranes, 343, 360.
Crocodiles, 289 (*see* Alligators).
Crows, 340.
Cyclones in the Feejee Islands, 67.

D.

Damper, the bread of the Bush, 137.
Dasyures, or native cats, 259, 319.
Daub-grass, 212.
DEATH-ADDER (CHAP. XXXII.), 284—287.
Deer, 391.
Defence of Australia, 487.
Derwent River, Tasmania, 57; its salmon ponds, 58.
Design on cover, 499.
Diamonds, 9, 243.
Diamond-snake, 276, 284.
Diggings (*see* Gold Districts).
Dingo, or native dog, 167, 262, 363.
Diprotodon, fossil, 259, 260.
Doctors in the Bush, 133.
DOGS AND FLYING FOXES (CHAP. XLII.), 363—368, 373.
Dogs employed at the Convict establishment, Port Arthur, 60—62.
Dogs for emeu-hunting, 345.
Dogs: cattle, 190, 192, 193; shepherds', 162, 387; kangaroo-dogs, 322, 327, 332.
Donkeys employed in New Zealand, 146.
Drafting cattle (*see* Cattle Drafting).
Drays for conveying produce, 118.
Drinking, 33, 102.
"Driving" kangaroos, 326; bustards, 348.
Drought, 119 (*see* Water).
Duck's-egg diamond, 250.
Duck-shooting, 342, 356.
Ducks: wood-duck, black duck, red duck, 356, 358; musk-duck, 360; mountain-duck, 385.
"Duffers," or cattle-stealers, 182.

E.

Eagle-hawk, 339.
Eagle Hawk Neck, Tasmania, 63.
Echidna spinosa (CHAP. XXXV.), 307, 312.
Eden, New South Wales, mode of embarking cattle, 51, 52.
Education: proposed Postal University in Australia, 31.
Eels, 292, 391.
Eggs: of ostriches, 221; of the emeu, 346; of the bustard, 349; of the Talegalla, or "Brush turkey," 350; of snakes, 308.
EMIGRANTS, ADVICE TO (CHAP. LII.), 444—455.
EMIGRATION, BENEFITS OF (CHAP. LI.), 435—443.
Emblem of these Colonies: design on cover, 499.
Emeu, 219, 346.

F.

Fatwax, or adipocere, 231.
FEATHERS, WINE, AND SUGAR (CHAP. XXIII.), 213—222.
FEDERATION OR SECESSION (CHAPS. LVI., LVII.), 476—491.
Feejee Islands, their position and characteristics, 66; ferocity of the natives, 67.
Fellmongering in Sydney, 28; new process, 29.
FENCING AND CLEARING (CHAP. XXII.), 206—212.
Fig-trees, 211, 352.
Fireplaces in the Bush, 153, 162.
Firing the scrub in cattle-hunting, 185.
Fir-trees, 211.
FISH (CHAP. XXXIII.), 288—295; 262, 391, 399.
Fishing: at Sydney, 34; in the Derwent, Tasmania, 58.
Fish-oil, 293.
FLAX (CHAP. XXIV.), 223—232; 463.
Flies of New Zealand, 392.
FLOODS (CHAP. XV.), 140—146; 41, 79, 119.
"Floors" for sheep-shearing, 174.
Flowers and fruit in the Bush, 153.
Fluke disease in sheep, 178.
Fly-fishing, 289, 293.
Flying-fox, 262, 364.
Flying-squirrel, 372.
FOOD AND REST (CHAP. XIV.), 128—139; 135, 149, 252, 274, 314, 337, 344, 348—350, 362, 377, 387, 410, 435 (*see* Meat).
Foot-rot in sheep, 178.
Forests of New Zealand, 88.

Fossil animals, 259, 260.
Fowls as diamond-finders, 245.
Fox-hounds in pursuit of the Dingo, 364.
Franklin, Benjamin, colonization of New Zealand advocated by him, 83.
Franklin, Lady, rewards given by her for dead snakes, 286.
Freehold homes, 459.
"Free Selectors," 456.
Fruit and flower gardens in the Bush, 153.
Fruit eaten by the Flying-fox, 365.
Fruit-trees of Tasmania, 57.
Furniture in the Bush, 165.
Fur: of the opossum, 316, 319; of the platypus, 297; of the rabbit, 377.

G.

GAME BIRDS, LAND (CHAP. XL.), 345—355; Game laws, Emeus, 345; Bustards, or Turkeys, 348; Stone-curlew, Spur-winged Plover, 349; Talegalla, or "brush turkey," and Lyre-bird, 350.
Geese, 357.
Gem-dust, 243.
GEOLOGY (*see* Mineral Wealth, Division IV.), 233—253; 261.
Gnats, 265.
GOLD DISTRICTS (CHAPS. V., XXV.), 47—54; 235—242; 7, 8, 10, 28, 50, 68, 84, 429, 432.
Grapes, 213 (*see* Wine, chap. xxiii., 213—222).
Grass and grazing, 154, 166, 209, 211, 212, 414 (*see* Pastoral Wealth, and Sheep).
Grass-eating animals, 258, 321, 332.
Grebe, 360.
"Green hide" of cattle, 199, 226.
Grouse, 391.
Grubs eaten by natives, 274; used as bait for fish, 291.
Guana, gigantic lizard, 275.
"Gullyraker," 460.
Gum-trees, 59, 208, 210, 274, 317, 365, 374, 420.
Gunyah, or hut for camping out, 138, 139.
Gympie, Queensland, Gold found at, 50.

H.

Harbours of Rio, Port Jackson, and Vigo compared, 21.
Hares, 391.
Hawks, 339, 392.
Herrings, 289.
Hobart Town, its position and characteristics, 44, 57—59, 65.
Honey, 274.
Hops, 226.
HORSES (CHAP. XXI.), 200—205; 115, 116, 184, 186, 198, 334, 345, 370, 406.
Horse-breeding, 34.
Horse-keep at inns in the Bush, 135.
Horse-racing, 34.
HUNTING AND SHOOTING (CHAP. XLIII.), 369—378: Snakes, 287; Wallaroo, 327; Kangaroo, 329, 332; Emeu, 345, 346; Bustard, 348; Dingo, 363, 369; Cattle, 369; Wild Horse, 369; Pig, 387.
"Hurdle-men," 169.
Hurricanes, 411.

I.

Ice-rooms of the P. & O. steamers, 229.
Illustrated newspapers used for wall-paper, 163.
Inns in the Bush, 134.
Insectivorous animals, 259.
INSECTS (CHAPS. XXX., XXXI.), 265, 274.
Iron-bark tree, 210.
Irrigation, 418—421.
ISLANDS OF AUSTRALASIA (CHAP. VII.), 66—69: Feejee Islands, 66; New Caledonia, Lord Howe Island, 68; Chatham Islands, 69.

J.

"Jabiru," or crane, 343.
"Johnny-cakes," 137.

K.

Kaa-kaa (bird), 385.
"Kangaroo Flats," a common name of places, 141.
Kangaroo-mouse, 259, 321.
KANGAROOS:—KANGAROO LIVING, (CHAP. XXXVII.), 321—331; KANGAROO KILLING (CHAP. XXXVIII.), 332—338; Bush-mouse, 259, 321; Kangaroo-rat, 322, 372; Kangaroo-dog, 60, 322, 332; Wallaby, Rock Wallaby, 323; Brush, or Bush Wallaby, 325; Wallaroo, 326; "Old men," 327, 329; true Kangaroo, 258, 260, 268, 328, 369, 379; in captivity, 337; their flesh as food, 338.
King-fish, 293.
Kingfisher, or "laughing jackass," 340.
Kiwi, 381.
Koala, or native bear, 315, 352.

L.

LABOUR, PRESENT CONDITION OF (CHAP. L.), 425—434, 436.
LAND GAME BIRDS (CHAP. XL.), 345—355.
LAND QUESTION (CHAP. LIII.), 456—461; 150, 458.
Language of the Natives, 401.
"Laughing jackass," or gigantic Kingfisher, 340, 373.
Launceston, Tasmania, 58.
Leaf-eating animals, 259.
Leases (*see* Land Question).
Licences for gold-digging, 242.
LIFE IN THE BUSH (DIVISION III.), 147—232.
Lizards, 272, 275.
Lord Howe Island, its position and characteristics, 68.
Lucerne, 212.
Lyre-bird, 350.
Lyttelton, New Zealand, described, 73.

M.

Mackerel, 288.
Magpies, 373, 340.
Mail-coaches, 79, 107; Mail stations, 109.
Maories of New Zealand, 86.
Marsupial animals, 257, 259—261, 309, 379 (*see* Kangaroo).
MEAT AND FLAX (CHAP. XXIV.), 223—232.
MELBOURNE described (CHAP. IV., 37—46): Port Phillip, Bass's Straits, Hobson's Bay, the River Yarra, 37; *Plan* of Melbourne and approaches, 38; arrangement of streets, fellmongering establishments, public and private buildings, 39; water supply, 40; floods, 41; cabs, 42—45; "summaries" of news, 43; Botanical Gardens, 44; boating on the Yarra, 44; its importance due to gold produce, 28.
Metals (*see* Mineral Wealth).
Meteorology, 408.
Middle Island, New Zealand (*see* New Zealand).
Minah, or "Soldier bird," 341.
MINERAL WEALTH (DIVISION IV.), 233—253; 8, 9, 436.
Mioimo, a South American grass, poisonous to sheep, 179.
Mirage on the plains of New Zealand, 82.
MOAS AND WEEKAS (CHAP. XLIV.), 379—385.
"Mobs" of cattle, 180, 182, 190, 195.
Mocking-birds, 343.
Monotreme animals, 257, 259, 296.
MOSQUITOS (CHAP. XXIX.), 265—270.
Mountain-ducks, 385.
Mountains of New Zealand, 72.
Mount Wellington, Hobart Town, 57.
Mules, 146.
Mullet, 288.
Murray Cod, 290, 294, 391.
Musicians in the Bush, 134.
Musk-duck, 361.
"Mustering" cattle and sheep, 183, 186.
Mutton, constant course of, 149.

N.

Names of places, 140.
" Native companion," or crane, 343.
NATIVES AND CLIMATE (DIVISION VI.), 393—421.
NATIVES AND NEW CHUMS (CHAPS. XLVI. and XLVII.), 395—407; 346 (*see* Aborigines).
NATURAL CAPITALS (CHAP. LIV.), 462—467.
NATURAL HISTORY (DIVISION V.), 255—392.
Natural Selection, marsupial animals and Darwin's theory, 261.
Navy for defence, 487.
Nelson, New Zealand, 84.
Nests of the parrot, 343; of the "brush-turkey," 350.
New Caledonia, 68.
Newcastle, near Sydney, 141, 251.
" New Chums," 404, 451.
New South Wales, its position and characteristics, 8; first sight of the Heads, 12; *Plan* and description of Port Jackson, 14—16, 21; Bushrangers, 99.
Newspapers, 163, 442.
NEW ZEALAND (CHAP. VIII. LOCAL, 70—82; CHAP. IX. SOCIAL, 83—89): Approach from Australia, extent, climate, 9, 70, 84, 87; government, capitals, 71; Alps of the Middle Island, 72; wheat cultivation, 72; extinct volcanoes, 73, 74; Christchurch, Lyttelton, 73—75; water supply, 78; dangers of crossing rivers, 79; pasture land, telegraph lines, 81, 88; mirage, 82; history of colonization, 83; discovery of gold, 84; trade, harbours, and capabilities, 85; tradesmen's tokens, 86; the Maories, 86; railways, telegraphs, 93, 94; flax, 223; gold-bearing quartz, 235; coal, 251, 252; fauna, 379.
Norfolk Island, palms and pines, 68, 69.
Norway rats, 377.
Nuggets (*see* Gold).
"Nuggets,"—unbranded calves, 182.

O.

Oak, 211.
Oidium Tuckerii, 215.
" Old men" (*see* Kangaroos).
Opium used by Chinese in the Bush, 158.
Opossum, 259, 261, 316, 372.
Opuntia cochinillifera, 216.
Organ-birds, 343.
Ornithorynchus paradoxus (*see* Platypus).
Ostrich-farming (*see* Feathers).
Otago, New Zealand, 84.
Otter, 380.
Owen, Professor, on the Platypus, 310.
Owls, 343.
Oxen as beasts of draught, 118.

P.

Pachydermata, fossil remains, 259.
PADDOCKING AND SHEARING (CHAP. XVIII.), 171—179; 154.
" Paddy-melon," or Paddy-malla, a species of kangaroo, 325.
Palms of Lord Howe and Norfolk Islands, 68.
Parrots, 343, 373, 385.
Partridges, 378.
Pastoral wealth, 7—9, 50, 81, 88, 123, 125, 166, 177.
Peaches grown in the Bush, 153.
Peak Downs Copper Mines, 49, 248.
Pearl fishery, Western Australia, 7.
Pears eaten by the Flying-fox, 365.
Pelicans, 343.
Penguin, 293.
Perch, 289.
Perth, West Australia, 7.
Petrel, 293.
Pheasants, 391.
Phormium tenax (*see* Flax).
Pianoforte tuners in the Bush, 134.
Picnics, 33.
Pigeons, 353, 385.
PIGS AND GAME (CHAP. XLV.), 386—392.
Pigs and peaches, 153.
" Piles" of money, 429.

PLATYPUS (CHAPS. XXXIV. and XXXV.), 296—314.
Poisonous character of the Platypus, 299.
Poisonous plants, 179.
Poisonous reptiles, 276, 284.
POLITICAL FEATURES (DIVISION VII.), 423—491.
Polynesian labourers, 437.
Porcupines, 296, 313.
Porpoises, 293.
Port Arthur, described, 59; ingenuity of convicts, 60.
Port Jackson, *Plan* and description, 14—16, 21.
Postal service, mail-coaches, packhorses, 112.
Postal University proposed, 31.
PRECIOUS STONES (CHAP. XXVI.), 243—247.
Preserved meat (*see* Meat).
Professional pursuits, 452.
"Prospecting" for gold, 230.
Pukeko, a species of rail, 381.
Pumpkin plants, 162.

Q.

Quail, 354, 376, 385.
Quartz, gold-bearing, 235, 236, 251 (*see* also Gold Districts).
Queensland, its position and characteristics, 9; commerce, 49; copper mines, 49; gold, sugar, cotton, tobacco, sheep and cattle, 50; Polynesian labourers, 437; sugar, 439.

R.

Races (*see* Horse-racing).
Rabbits and rabbit sausages, 377, 391.
RAILWAYS AND ROADS (CHAP. X.), 93—98; 74, 78.
RAILWAY ACROSS AUSTRALIA, PROPOSED, 495.
Rain, 414, 419.
Rakaia River, New Zealand, 79.
Rats, 377, 380.
Rattlesnakes, 286.
Ray, 293.
Red ants, 272.
"Red Soldier," a name of the Kangaroo, 328.
Regattas, 34.
Reptiles, 262, 275, 379.
"Ringing" timber-trees, 209.
Rivers, 78, 95, 143, 144, 374, 391 (*see* Fish).
Roads in Australia, their progressive formation described, 96, 97; 97, 110.
Rock-salt for diseases of sheep, 178.
Rocky River, New South Wales, 238.
Routes to Europe, 85, 496.
Rubies, 245.
Runs or stations in the Bush, 149—158.

S.

Saddles, 204.
Salmon, 292, 391.
Salmon ponds in the Derwent, Tasmania, 58.
Salting meat, 227.
Sandridge Pier, Melbourne, 38.
"Sandy Creek," a common name in Australia, 141.
Sausages, Rabbit, 377.
Scorpions, 271.
SECESSION OR FEDERATION (CHAPS. LVI., LVII.), 476—491.
Sharks, 36, 293.
SHEARING AND PADDOCKING (CHAP. XVII.), 171—179.
Sheep rearing and sheep farming, 122, 124, 127, 141, 159, 166, 169, 231, 364, 448 (*see* Grass, Pastoral Wealth, Shearing, Shepherding, Wool).
Sheep inspectors, 124.
"Sheep stations," 161.
Shell-fish, 305, 311.
SHEPHERDING (CHAP. XVII.), 159, 170.
Shepherds' dogs, 165.
Shepherds' huts, 162.
Shops at stations in the Bush, 157.
SHOOTING AND HUNTING (CHAP. XLIII.), 369–378: Wild horses, 203; the Wallaby, 268; the Platypus, 304; the Kangaroo, 325, 326, 335; Wild Ducks, 342, 356; Parrots,

344; Bustards, 348; Stone-curlews, Spur-winged Plovers, 349; Lyre-birds, 351; Wild Pigeons, 352, 353; Wood-ducks, 357, 374; Musk-duck, 361; Flying-fox, 366; Wild Pig, 387.
"Shooting" rivers and creeks, 375.
"Shouting" (or drinking) in Australia, 33, 102.
Silk, 218.
"Sinking" for gold, 239.
Slab walls of buildings in the Bush, 151, 162.
Sloth (Koala, or native bear), 315.
Smoking (*see* Tobacco).
"Snags" in rivers, 95.
SNAKES AND SNAKE-BITES (CHAP. XXXI.), 275, 283.
Snakes, their absence in New Zealand, 379.
Snipe, 362, 376.
"Soldier-bird," or Minah, 341.
South Australia: its position and characteristics, 7; commerce, 49; production of wheat, 50; copper mines, 49.
"Southerly busters," 411.
SOUTHERN CROSS, THE, 499.
Southland, New Zealand, 84.
South Sea Islanders, 437.
"Spaniards" (plants), 389.
Spiders, 272, 273.
Sport (*see* Angling, Hunting, Shooting, Horses, Kangaroos, Snakes, Cattle, Dogs).
Squirrels, 372.
Stalking wild horses, 203.
STATIONS IN THE BUSH (CHAP. XVI.), 128, 149—158.
Steam shipping companies, 96.
"Sticking-up" (robbing) by Bush-rangers, 99, 100.
"Stingaree," or Stinging Ray, 293.
Stockmen, 181, 182, 197.
Stock-whip, 188.
Stores, 129; at stations in the Bush, 156.
Storm Bay, Tasmania, 56.
Stringy-bark, 210.
SUGAR, WINE, AND FEATHERS (CHAP. XXIII.), 213—222.
Sugar, its cultivation in Queensland, 50, 439.
Sugar beer, 226.
"Sugarloaf," a common name of places, 141.
"Summaries" of news, for postage to England, 43.
"Supers," or overseers of sheep stations, 160, 181, 198, 405.
Surgeons in the Bush, 133.
"Swag men," 428.
Swallows, 342.
Swamp oaks, 211.
Swans, 356.
Swan River, West Australia formerly so called, 7.
SYDNEY, DESCRIPTION OF (CHAP. III.), 23—36: The Cove, 23; waste ground, public and private buildings, 24, 27; shops, horse-fastenings, branding horses, 25; cabs and omnibuses, the Domain, Botanical Gardens, 26; clubs, Houses of Parliament, 27; Hyde Park, 26, 27; the Museum, 27; suburbs, fellmongering, 28; Convict element in population, 30; University, 30; proposed Postal University, 32; first impressions, 20; its importance due to export of wool, 28; picnicking, 33; horse-breeding, race-meetings, yachting, boating, fishing, 34; bathing, 35; snakes, 285; immigration of Flying-foxes, 365.
Sydney Harbour, *Plan* and description, 15, 16, 21.
SYSTEMS OF COLONIZATION (CHAP. LV.), 468—475.

T.

Talegalla, or "Brush-turkey," 350.
Tallow and boiling establishments, 155.
Tasman: Legend of his discovery of Tasmania, 64.
TASMANIA DESCRIBED (CHAP. VI.), 55—65: its position and characteristics, 9; voyage from Sydney, 51, 52; Cape Pillar, basaltic columns, Tasman's Island, 55; Storm Bay, Lady Franklin Island,

56 ; River Derwent, Hobart Town, 57, 58, 65 ; Port Arthur, 59 ; English names of places, 65 ; opossums, 319 ; snakes, 286 ; tigers, 258.
Tea in camping out, 271.
Telegraph communication, 81, 94, 109, 495.
Tents for camping-out, 138.
Termites, 272.
Tests for precious stones, 245.
"Thunderbolt," the Bushranger of New South Wales, 100, 105.
Thylacine, or Tasmanian tiger, 258.
Tiger, Tasmanian, 258.
Timber used for building, 130 ; preparation of, 209, 210.
Tobacco, its cultivation in Queensland, 50 ; its influence with the Natives, 162, 400.
Tokens, Tradesmen's, in New Zealand and Tasmania, 86.
Tomahawk, its use in ascending trees, 317.
"Toot" (New Zealand), poisonous to sheep, 179.
"Townships," 129, 450.
Tracking Bushrangers by Aborigines, 102.
Tradesmen's tokens, 86.
Trapping : the Dingo, 167 ; the Wild Horse, 202.
TRAVELLING (*see* Mail-coaches, Coaches and Hacks, Railways).
Travelling-stock : beasts and sheep, 122.
Trees, 210, 211, 352, 367, 419 (*see* Cedar, Fig-tree, Fir-tree, Gum-tree, Oak, Palm).
Trout, 76, 293, 295, 391.
Turkeys, 348, 350.
Turtle, 292.
Tussock-grass plants, 389.
Tyrol, Quartz mining in the, 237.

V.

Van Diemen's Land, Tasmania formerly so-called, 9 (*see* Tasmania).
Vegetables grown in the Bush, 154.
Venomous reptiles, 276, 277.
VICTORIA, GOLD DISTRICTS OF (CHAP. V.), 47—54 : Castlemaine, Ballarat, 8, 47, 48 ; Bushrangers, 99.

W.

Wages (*see* Labour).
"Walking up" quail, 355.
Wallaby (*see* Kangaroo).
Wallaroo (*see* Kangaroo).
Wash-pools, for sheep-washing, 176.
Water, 78, 417 (*see* Rivers, Wells).
Watercress, its abundance in New Zealand, 76 ; its value to smokers, 77.
WATER GAME BIRDS (CHAP. XLI.), 356—362.
Water-hens, 360.
WAYFARERS (CHAP. XIII.), 118—127.
WAYS AND MEANS OF GETTING ABOUT (DIVISION II.), 91—146.
Weeka bird, 381.
Wellington, New Zealand, 84, 88.
Wells, 418.
West Australia, its position and characteristics, 7.
Wheat cultivation, 8, 48, 50, 72.
"Wheeling," or turning a "mob" of cattle, 186.
Whips of cattle-hunters, 188.
Whiting, 288.
Wild Dog (*see* Dogs).
Wild Horse, 201 (*see* Horses).
Wild Ostrich, 219 (*see* Ostriches).
Wild Pigeon, 352 (*see* Pigeons).
Wild Pigs (*see* Pigs).
Williamstown Pier, Melbourne, 38.
Wilson's Promontory, New South Wales, 11.
WINE, SUGAR, AND FEATHERS (CHAP. XXIII.), 213—222.
Wire-fencing, 208.
Wombat, 259, 260, 316.
Wood used for building, 130.
Wood-duck, 356, 358, 371, 374, 375.
Wood-hen of New Zealand, 381.
Wool, its production, export, and fluctuations in price, 7—10, 28,

50, 119, 156, 172, 174 (*see* Fell-mongering, Sheep, Shepherding, Pasture).
"Wool-growers," 428.
Wool-stores, 20.

Y.

Yachting, 34.
Yan-Yean Lake, source of the water supply of Melbourne, 40.
"Yards" for cattle, 194.
Yarra River, 37, 38.

Z.

Zoological Gardens, a desideratum, 263, 312.
Zoology of Lord Howe Island, 69.

THE END.

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